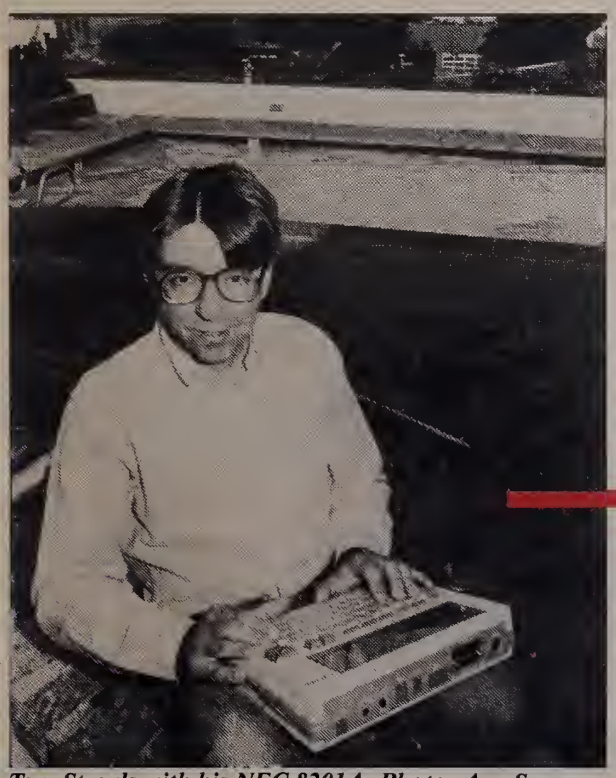
VOL. 1, NO. 4 • DECEMBER 1984

MicroTimes™

California's Computer Magazine

COMDEX

COMDEX Report:
The New, The Exciting and the Bizarre from the Annual Las Vegas Extravaganza



Tom Stroyls with his NEC 8201A. Photo: Ann Summa

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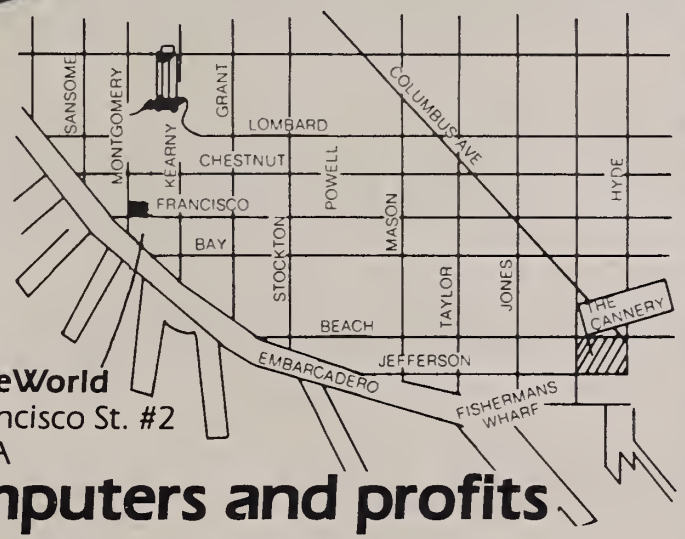

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Whether or not it lived up to Orwell's expectations, 1984 was definitely an eventful year in the computer industry. Once-prosperous companies foundered and died, others emerged out of nowhere to take the market by storm. While some trends are fairly well-defined, only time will tell who the winners and losers will be.

This fall's COMDEX trade show, held last month in Las Vegas, reflected both the promise and uncertainty of the computer scene. Jeff Spurrier, in our cover story, reports on some of the trends and new products in evidence. He also presents a comprehensive analysis of three leading candidates in the current lap computer market.

In other stories, Pat Hamilton checks in with some computer users who use their terminals to work at home; Ken Goehner interviews Adam Osborne and discusses his latest venture, Paperback Software; and the fearless Jina Bacarr ventures into the business world.

All of us at MicroTimes join in hoping that 1984 was a good year for you, and that 1985 turns out even better. As we enter our second year in the California computer community, we hope you'll continue to let us know what's on your mind, how you like what we're doing, and what you'd like to see in future issues. Stay in touch, and best wishes for the new year.

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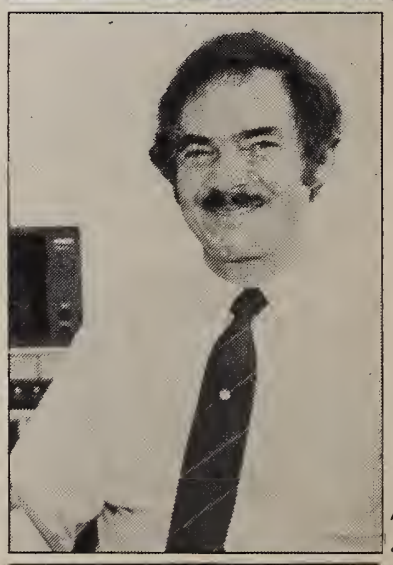

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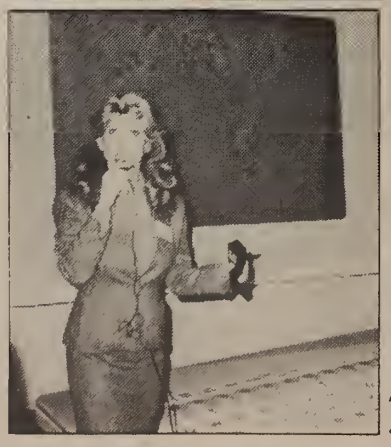

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EDIT MODE

By Don Hamilton

IN RECEIVING

IBM dropped four new packages in our mail slot this month: *Filing Assistant*, *Reporting Assistant*, *Writing Assistant*, and *Graphing Assistant*. *Filing Assistant* can sort by name, number, or find all files greater than or less than a chosen number. *Reporting Assistant* allows you to generate tabular reports based on the information that you stored in *Filing Assistant*. *Writing Assistant* allows you to merge data saved in *Filing Assistant* into letters. For instance, if you want to extract all the past due balances and merge them with a nasty letter, IBM says this is the program for you. The program includes a spelling checker which displays a window of alternate spellings which it would prefer for the word in question. *Graphing Assistant* claims to be capable of graphing files from *Filing Assistant*, *Multiplan* or *VisiCalc*. The resulting graphs can be stored as pictures and merged into the *Writing Assistant* program.

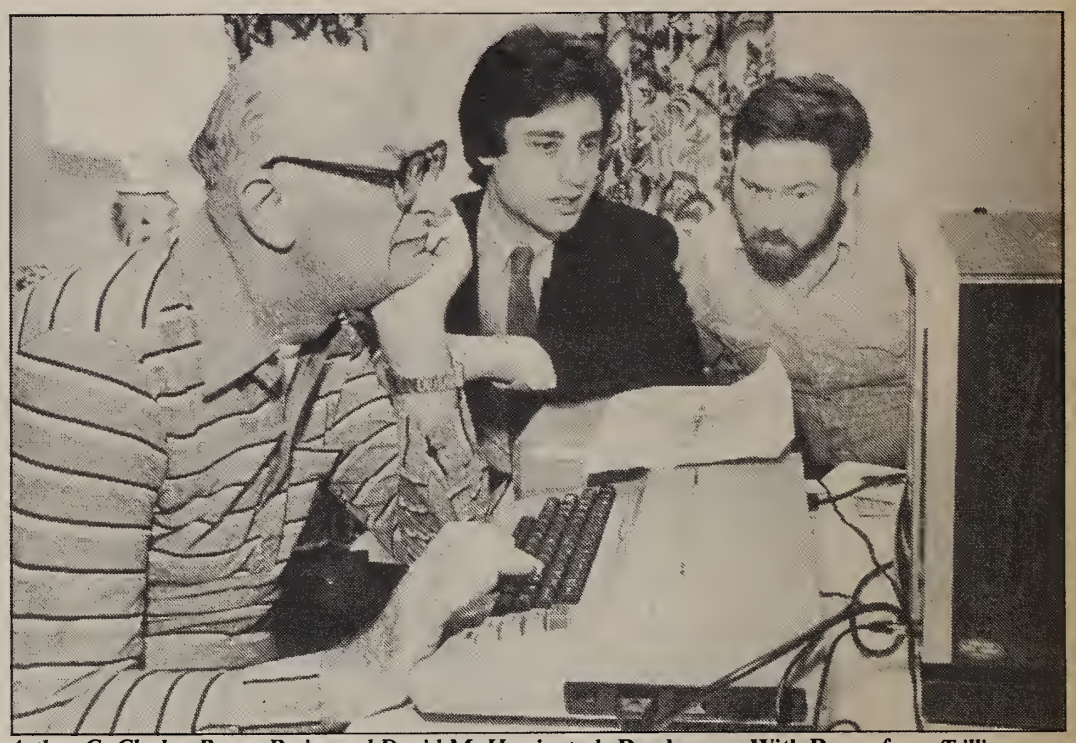
Superex Home Software's *The Home Executive* arrived. The instruction manual is 19 pages long and appears to have been written on a Macintosh. The program has

The Home Executive by Superex Home Software

Address Book, Appointment Book/Calendar, Collector's List, Gift List, Household Inventory, and Investment Portfolio Expenses. The box is a folio shaped cardboard box with a plastic handle. The handle fell off 4 or 5 times before I could open it. The bottom fell out of the box several times. It stood out from a stack of new programs, so I gave it a try.

After checking out the list of programs I settled on the *Financial Analyst*. I booted the system, and clicked the Financial Analyst program. I clicked the Loan Analyzer which determines monthly payments on fixed-rate loans. The first question was "What is the amount of the principal?" "$27,000," I answered. "What is the interest?" it asked. "Fifteen percent," I replied. "How many years?" it queried?" "Fifteen," I answered. "How many months?" This one threw me. How many months to what, I thought. After some instructional sorting, I found that if I had answered the question pertaining to years, all I had to do was press "return" and continue. I did so. The answer that flashed back — $33,000 — caught me off balance. Somehow I knew that could not be the monthly payment. After going through the steps several times I concluded that the program had a real weakness.

The "help" key wasn't much help.



Arthur C. Clarke, Byron Preiss and David M. Harris study **Rendezvous With Rama** *from Trillium*

Electronic Arts announced their new three-in-one multi-player *Adventure Construction Set*. The system allows a player to design graphic and text adventures that may be played by from one to four players.

The suggested retail price is $50.00. For this you get 250 different locations, 500 unique creatures and characters, and 5,000 or more treasures, magic items, doors, walls, furniture pieces, weapons, sound effects, musical themes, and other props and enhancements. Simple menus are used to allow the user to concentrate on the creative side of adventure game design. Several adventure games are included on the disk for game and tutorial purposes. The games can be modified to help the novice user through the introduction to adventure game design.

Broderbund Software announces the release of *Karateka* this month. Described as "an action-packed movie," *Karateka*'s scenario involves a karate master who must rescue his bride-to-be from an evil warlord. A joystick control moves your hero.

Championship Lode Runner has been introduced for the *Lode Runner* fanatics of the original 150-level version introduced in 1983. This game is extremely difficult and only recommended for experienced *Lode Runner* players. You cannot construct your own screens in this game, but don't worry, you won't have time anyway.

Cyborg is here for the Macintosh. It features higher screen resolution, detailed graphics, faster game response time, sound effects, and an interactive control panel used with the mouse. The suggested retail price is $39.95.

Trillium's first five games have arrived: *Fahrenheit 451*, *Amazon*, *Shadowkeep*, *Dragonworld*, and *Rendezvous with Rama*. These products are beautifully packaged games based on famous stories. The games were designed by Michael Crichton and Byron Preiss in collaboration with the original authors. Science-fiction enthusiasts now have a chance to live their favorite story. Trillium is a new division of Spinnaker Software Corporation. They also have new products being sold under the name Fisher-Price.

Get Organized!, from **Electronic Arts**, is another integrated desktop software package available for IBM and compatibles. The program contains seven integrated applications. They include Writer, a word processor, Address Book, an Electronic Rolodex(tm), TeleComm, a telecommunications package, index cards, a filing system, calendar, an appointment book with to-do list, Notepad, and Calculator.

NEWS

First Star Software announced a contest with a grand prize winner to be flown with a parent or companion to New York City for three days and two nights. (It might be better to offer a contest to fly people out of New York City! It's a better prize and requires only a one way ticket.) But, just in case you want to go, enter by returning your warranty card.

The **Morrow Pivot** with 5 ¼ in. disk drives is being shipped to dealers. The computer may be one of the most compatible of the portable IBM compatibles because of its disk size. The computer is approximately the size and shape of Archie Bunker's black lunch box.

Morrow plans to introduce a 640K RAM version very soon. It has an RS-232C serial port and a 16 by 80 column display on a 480-by-128 pixel resolution.

The **Data General/One IBM compatible** is now available. This computer is pure magic. With an 80 x 25 line screen, it can be expanded to 512K of RAM, and boasts a 1440K disk storage. That, my friends, is 1.5 million, or a lot of memory to fit in one briefcase. The system runs *Flight Simulator*, *Lotus 1,2,3* and many others. The only problem is that it operates on 3.5 inch disk drives, so you will have to convert or buy programs on that size disk. The advantage of the small size is obvious! They fit in your pocket and allow your computer to fit in your briefcase. The small disk is able to pack more data, due to less thermal expansion and, therefore, a higher data density.

Mouse Systems has started shipping their *PC Paint*. With this program you can turn your PC into a Macintosh. Corporations are beginning to discover how useful the paint programs are for presentations and demonstrations. Due to the high quality of the Mouse Systems *PC Paint* program, they may gain an early lead in the market and become a standard for IBM systems. Mouse Systems also has the advantage of color over *MacPaint*. However, it is hard to beat the sharp image of the *MacPaint* display and printer output, not to mention the fact that even vice presidents and directors can use it without training. Mouse Systems Corp., 2336H Walsh Ave., Santa Clara, CA 95051 (408) 988-0211.

Speekeasy is now available for the IBM PC and compatibles. *Speekeasy* is a database system for the bad speller. Even if you only remember part of the name or telephone number, or if you just can't spell properly, the program can find your data. *Speekeasy* costs only $87, and a demo disk can be had for only $15. Contact Correlation Systems, 81 Rockinghorse Road, Rancho Palos Verdes, Ca. 90274 (213) 833-3462.

Tandy, which continues to grow by leaps and bounds, announces another new computer. The newest is the Tandy 1000, which will sell for around $1200. With 128K of RAM, IBM PC compatibility, and such a low price, it may take a very large bite out of the Compatible market. The keyboard is like that of the Tandy 2000, which is superior to the IBM PC and most of its clones in that the ten key pad is not under the arrow keys and the shift keys are in their proper place. Also, Tandy has one of the largest service organizations of any computer company.

Koala Technologies Corp. announced that they have signed an original-equipment-manufacturer contract for Koala to manufacture its popular KoalaPad touch tablet for Tandy home computers. The KoalaPad tablet for Radio Shack will be called the TRS-80 TouchPad and will be marketed both in the United States and overseas through Tandy's Radio Shack retail outlets.

Another of the Koala Technologies products that seems to be in great demand is the Muppet Learning Keys for preschoolers. The keyboard is designed for children age three years and up, and it's right on target, since it bypasses the often confusing standard computer keyboard to let a child play and learn at his or her own rate, without help, and directly with the computer. To develop the new pad, Koala brought together Dr. David Thornburg, the inventor of the KoalaPad, Henson Associates of New York City, and Sunburst Communications of Pleasantville, New York, to work with the rest of the Koala design team. The result is a good product that should sell well.

"**Garden of Adam** — Official Newsletter of Adam Users of America" the ad reads. This ad comes at about the same time as the Wall Street Journal is proclaiming the demise of Coleco's Adam Computer. Let's hope the Wall Street's doom and gloom predictions are wrong. ■

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Muppet Learning Keys by Koala Technologies

1984 LAP COMPUTER REPORT

MicroTimes Checks Out the Truly Portables.

By Jeff Spurrier

By 1989, sales for lap, handheld and transportable computers will hit $17 billion. Lap computers, which are expected to enjoy compound annual growth rates of 112%, are expected to eclipse transportables in popularity by 1986. — *Based on a recent report from Creative Strategies Inc., a San Jose market research firm.*

While not everyone agrees with the scenario hinted at above, there are indications that the future of computing may indeed be headed for the laps of America.

It seems like the logical thing to do. After all, lap computers offer power and ease of use vastly superior to any notebook or memo pad. The lap computer has been a staple for many journalists, salesmen, and field engineers for some time now and it looks like the machines are about to break through in a big way on college campuses as well. Indeed, in an experimental program at a college in Texas, every student is *required* to use a lap computer for classroom notes.

Despite the rosy projections, however, there are some clouds on the lap computer horizon — as there are in the micro world overall. The Workslate, a $900, 3-pound machine that boasted some attractive data-processing features (along with a terrible keyboard) was declared dead in July. And more recently, Gavilan Computer, the innovative company who developed one of the first lap computers in 1983, declared Chapter 11 bankruptcy in October, leaving a $31 million debt in its wake.

However, no matter how bleak it looks for the future of one system, it seems there's always something new lurking about. Data General has just released a lap computer that boasts two microfloppy disc drives, a 25 line by 80 column LCD screen, bundled software, and MS-DOS — all packed within a 9-pound package that sells for just under $3,000.

The Data General's stats are impressive but so is the price. This sort of versatility and compactness was pretty much impos-

Clockwise from front: Epson/Geneva PX-8, Sord 15-11, NEC 8201A. Photo: Ann Summa

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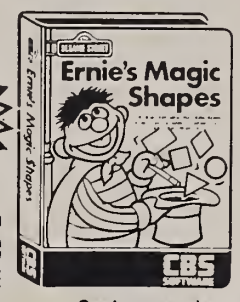

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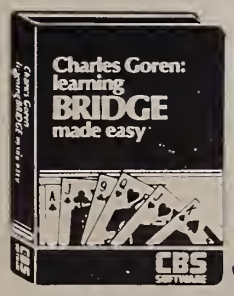

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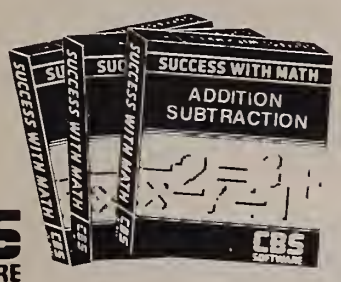

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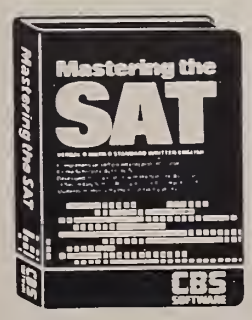

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sible just a few years ago, no matter how much one was willing to spend. Now in the upper-end scale of lap computers there are some very attractive models available ranging from the Grid (at the high end for $5,000 and up) to the Sharp PC-5000 (for $2,000).

Of course not everyone has that kind of money to spend on what in some ways is a luxury. After all, no matter what the sales claims say, for many users lap computers are not yet a total substitute for a desk-top machine — merely a useful extension. For this review the selection has been limited to a trio of machines that feature true word processing capabilities (an adequate keyboard and screen display) and are affordable — i.e. under $1,000.

Sord IS-11 Consultant.

When the Consultant emerged early last spring, it received generally high marks from early reviewers who saw it as the shape of things to come: integrated software, 64K, and reliable high speed microcassette data storage — all packed into one neat little package that retailed for under $1,000.

At the time, the IS-11 looked like the most attractive and innovative lapful available, offering desk-top computer power, all-in-one "free" programs, and a price that, like the early Kaypro, was clearly the best value around. (See sidebar for more detailed description of the Consultant.)

Despite this attraction, the Consultant thus far has failed to catch on with potential customers — students, traveling businessmen, journalists, and others who require data/word processing in the field.

Part of the problem comes from the fact that in this country, Sord Computer Systems, a Japanese manufacturer, is still something of an unknown quantity. In Tokyo circles, however, Sord is referred to as a "The Apple of Japan" — a success story that is made all the more romantic due to the charismatic personality of its founder, Takayoshi Shiima, whom some see as The Woz in kimono. Like Apple, Sord made a name for itself by going head to head against established computer giants. Despite the power of companies like Fujitsu and Mitsubishi, Sord developed a very respectable following at home, making it the only Japanese firm ever to have gone from 0 Yen sales to over 10 billion Yen sales in less than ten years.

All in all, it's not a bad track record. Unfortunately the Sord success has not been matched in America. Lack of consumer awareness is only part of the problem. There are also some serious problems with the Consultant package as well.

The screen is small (although this is soon to be rectified with a 35 line by 80 column display), the documentation is nearly indecipherable, and the software, for all its potential power, is frequently clumsy and awkward. The programs are built around dozens of hidden menu lists which frequently confuse more than they help. This problem is especially glaring when one tries to use the machine for word processing, one of the main attractions of lap computers. I had a IS-11 for over a week and only finally figured out how to save files after a laborious and frustrating process of trial and error. Figuring out the oddball vocabulary that is built into the machine is a cross-cultural experience that I would not recommend.

And one final complaint — for some reason the makers decided not to include a version of BASIC, an omission that limits the computer's attraction severely among those who feel constrained by the awkwardness of the built-in software.

However, to be fair, it is necessary to mention that when it comes to spread sheets, data calculations and graphs, the Sord can be truly remarkable — although once again the poorly written documentation nearly sabotages the software.

But despite its problems, the Sord has its American fans. The power of the machine, particularly when linked up to a larger mainframe computer utilizing the I-Pips operating system, is impressive.

George van Valkenberg, the president of Automatic Computer Enterprises of San Diego, is about to launch a computer rental service based on the Sord — although not the built-in software.

"We've developed a Wordstar-compatible program for the machine," says van Valkenberg. "When we first looked at the Sord word processing software we found it left something to be desired. Our primary purpose is to allow the machine to upload so you can use it as a field tool. We plan to rent Sords for $1 a day to businessmen and students. The idea is that after a client does some work in the field, he can plug the machine into a telephone line and upload to our machine. We will then edit, format, and print the text in the typestyle and quantities specified."

Compared to his own experiences in school, he adds, the freedom offered by the Sord is mind-boggling.

"When I went to college, I would be up until 1:30 the night before, trying to finish a paper on time. Now a student can write a little anywhere, set it aside, go back to it, revise it, and finally when he's done, basically the paper is all typed."

Van Valkenberg says that he and his company spent months researching the lap computer market and finally settled on the Sord because of the company's reputation for solid engineering and reliability. With the ROM cartridge program which his company is working on, the Sord may yet capture a solid core of American fans.

"We expect to use the Sord in a variety of functions," says van Valkenberg. "We want to develop programs for chemical companies' field reps, for general sales reps. We see the Consultant as probably the most complete little machine on the market for the money. It has a great deal of flexibility because of its ROM cartridge interface. You can program it any way you want."

NEC 8201-A

When the NEC 8201-A (and its twin, the Radio Shack Model 100) came out over a year ago, the era of lap computers truly began. Finally here was a machine for under $1,000 that was truly portable in a way unknown among the suitcase-size computers. While the 8201-A didn't have the power of its high-tech cousins like the Grid or the Teleram, it also didn't have the high price.

The 8201-A, which like the Model 100 is a product of the Kyocera design team in Kyoto, is truly a machine for the common computerist on the move. (See sidebar for more details.) It may not have the software kick of a machine like the Sord or the glitter of a flip-top model like the Epson but it does have character. The NEC is the Volkswagen of lap computers, providing a dependable, functional, no-frills machine for a bargain rate.

While the NEC's popularity has been largely overshadowed by the success of its twin, the Model 100, there are indications that the 8201-A is finally getting the respect it deserves. *Portable 100*, a monthly magazine dedicated to the Model 100, recently announced that major expanded coverage of the NEC will be a new editorial direction.

The two machines look alike but vary significantly in their performance, support and packaging. While the NEC offers more memory in its standard model, the Radio Shack comes with a built-in modem. The 8201-A runs faster but is not supported by a network of shops and user groups as is the Radio Shack. The choice between the two is almost a toss-up although most reviewers give the nod to the NEC for a variety of reasons — primarily the greater speed and a better keyboard layout.

For what the NEC offers, it does a remarkable job. The display on the 8 line by 40 column screen is one of the most readable of any lap computer utilizing an LCD readout. And when you're working with a small display, being able to read at a glance makes a big difference. The machine comes without any form of data storage (other than the built-in 16K RAM chip — expandable to 96K) but there are the standard interface outlets which allow one to transfer memory to a tape cassette. The software and documentation that comes with the machine is simple, easy to understand, and totally functional — although not as powerful as one might want.

For Tom Stroyls, a Santa Monica-based computer marketing consultant, the NEC 8201A was just the sort of machine he was looking for.

"I bought it as a substitute for a full-blown desktop word processor," he says. "And to do that I added 16K RAM and bought a word processing/formatting program called 'Write Plus.' I used the machine a lot last winter when I was traveling and I had a lot of short memos and reports to write."

Despite the NEC's obvious limitations,

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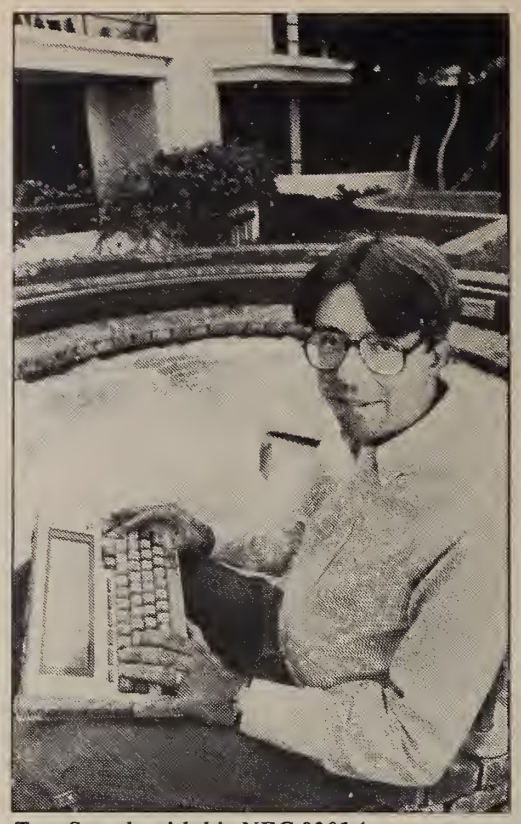
adds Stroyls, the machine is all the computer that most people with a need for a portable would ever require.

"The 40-column screen can be a problem when you're trying to visualize what a letter or a specially formatted document is going to look like," he admits. "But for simply creating text I didn't find the size any handicap at all. I don't find the 80 column (LCD) screen very readable compared with the 40. There is a limit also to what you can do when the maximum document size is only about 15 pages. Even when you start working with 5 or 6 pages, certain kinds of editing become a problem."

Still, says Stroyls, the NEC offers the best value for the money — depending on one's personal needs. It is not the right choice for people who have an unclear idea of what they want to do with a computer.

"If you have a single professional purpose like journalism or reporting for a sales force, then the NEC is fine," he says. "But if you're planning to have the NEC as a home computer system then you'll get tired of it. I found the word processing on it was well justified for the money I spent but if I just wanted a computer system for the home and was going to spend $500, then I'd go to Federated and get a Pied Piper."



Tom Stroyls with his NEC 8201A. Photo: Ann Summa

Epson Geneva/PX-8

If you picked up a computer magazine within the last few months you probably ran across the eye-catching three-page ad that Epson took out to hype the Geneva: "What would you say to a new lap-size computer with sexy good looks like the Apple IIc and bone crushing power like the $3000 H-P portable, all for $995?"

The answer, spread across the following two pages, was simple: "Gimme."

Gimme, indeed. The Geneva is the package that many have been waiting for: 64K of RAM, 8 line by 80 column screen, an excellent keyboard, built-in micro-cassette, CP/M and Wordstar-on-a-chip. Compared to Epson's initial (and pioneering) effort at a lap computer, the good-try-but-no-cigar HX-20, the Geneva is a lap lover's dream. (See sidebar for more details.)

Ever since the machine was released this past summer, reviews have poured in with accolades for the PX-8. The Geneva, one reviewer has written, is the first portable

Lap Computer Specifications

Epson Geneva/PX-8

The Epson Geneva comes with a built in high-speed micro-cassette recorder, an 8 line by 80 column LCD screen, a 72 key keyboard (which also contains an imbedded numeric keypad), 64K RAM, 32K ROM, and a supply of interface outlets (analog-to-digital interface, bar code reader, system bus, and two serial ports — note: there is NO parallel printer interface).

One of the Geneva's biggest selling points is the clever software-on-a-chip design. CP/M 2.2, BASIC, Portable Wordstar, and Portable Calc/Scheduler are all bundled with the machine in the form of snap-in ROM capsules. Unfortunately, the Geneva only has room for two capsules at a time.

The Portable Wordstar developed for the Geneva lacks some of the features of its desktop cousin — i.e. help menus, file directory, renaming a file — to name a few. But compared to the simple-minded text editors supplied with other lap computers, Portable Wordstar is a genius. The documentation supplied with the software is excellent, clearly written and full of cross references, cautions, and reminders.

There are a variety of options when it comes to storage of data on the Geneva — provided one doesn't mind spending a little more money. The built-in micro-cassette does the job although it is slow and the transfer rate is so high that data could easily be lost. In addition, in order to save a Wordstar file on the micro-cassette, one must first save the file on the machine's RAM disk and then use CP/M to PIP it to the cassette. A better solution is to spring for the added expense and buy either the optional 3.5 inch floppy disc drive ($599) or one of the two RAM disk expansion units (60K for $329 and 120K for $460).

NEC

The basic NEC PC-8201A comes with 32K ROM, 16K RAM, five function keys (which in combination with the shift key become ten), an 8 line by 40 character screen and fifteen programs — some bundled within the machine and others contained on a cassette.

Some programs are useful and adequate for the machine, such as the Text Editor, Telecommunications, Scheduler, BASIC, and the various Utility programs. However, some of the other programs offered "free," such as the Games, Music Songs, and Investment Portfolio, leave something to be desired. Fortunately there are scores of additional programs written specifically for the NEC, giving the user a variety of fairly affordable alternatives.

When one turns on the machine, all the programs and files within the RAM are listed on a directory along with a statement of how much memory is still available. For storage of data, the NEC offers a variety of options from a standard cassette tape recorder to RAM chips to a portable floppy disc drive. Other peripherals include a portable thermal printer, monitor, and full size printer.

The NEC PC-8201A weighs less than four pounds and measures 11.5 by 8.25 by 2 inches. The current retail price is $599 although the machine can be had on discount for as low as $375.

SORD

The IS-11 comes with a built-in micro-cassette recorder, an 8 line by 40 column LCD screen, a 70 key keyboard, 32K RAM (expandable to 64K), 64K ROM, and a variety of standard interface outlets (RS-232, bar code reader, parallel printer port, ROM cartridge, telephone jack for modem, numeric keypad, etc.).

The computer's integrated software is broken down into: I-Pips (a spreadsheet program that has some graphics capabilities and also handles most of the data transfer operations); I-Edit (a limited use "notepad" text editor designed for short memos only); I-Calc (which allows the IS-11 to function as a calculator via the embedded numeric keypad); I-Comm (a communications program designed to facilitate the transfer of data by using a modem or the RS-232 outlet); and I-WP (the "big brother" of the I-Edit program, this word processing program contains most of the usual functions which one expects with a text editor including cut and paste, search and recall, block moving and deletion, copy and justify printed files).

While the IS-11 relies upon the micro-cassette for the primary storage of data, an optional 3.5 floppy disc drive is also available. Other peripheral hardware items for the Sord include a thermal printer, a serial printer, a notepad keyboard and a CRT monitor. And reportedly this winter the company will be coming out with a 35 line by 80 character LCD screen which, one hopes, will be an improvement over the current display.

The Sord IS-11 Consultant weighs 4.5 pounds and measures 11.75 by 8.5 by 1.5 inches. The current retail price is $995.

computer to come along that he would pick as an alternative to the Radio Shack Model 100 — which is strong praise indeed considering the wide respect that the Radio Shack has garnered from the industry.

To compare the Geneva to the Radio Shack, however, is almost a case of apples and oranges. The Geneva *feels* like a mid-range portable — somewhere in between the NEC/Radio Shack and the higher priced "luxury" lap computers: the Data General One, the Hewlett-Packard HP-110, the Teleram, and the Grid series. Yet it is priced at the upper-end of the "affordables." After all, when the Radio Shack came out, it also was retailing for $995.

The Geneva achieves this quality feel by attention to details, such as excellent documentation and attractive design, i.e. a tilt-up screen (which for all its cuteness is still hard to decipher under poor lighting conditions), recessed support legs, and a sliding protective cover.

Of course design is not the only attraction of the Geneva. The machine's version of Wordstar works like a dream, even for a novice Wordstar writer. In addition, CP/M and BASIC are included along with a Scheduler and a spreadsheet program (Portable Calc).

For all its pluses, however, the Geneva does have some fairly glaring faults as well. Most irritating is the omission of a parallel port for a printer — not everybody has an Epson printer, after all. Another disappointment is the fact that with only two ROM openings available, one is immediately limited as to the number of programs usable at one time. And don't look to the addition of extra memory to help this problem. Both Portable Wordstar and Portable Calc are write protected and *can't* be transferred onto a micro-floppy or RAM disc unit.

Despite these drawbacks, the Geneva is the best thing to appear on the lap computer horizon for some time. And if you don't believe me, just ask Carolyn McCarthy, the editor/publisher of an Epson user-oriented magazine based in Detroit.

McCarthy, who also owns the Epson desktop model, the QX-10, says she bought the Geneva as soon as it was available and has used it continuously.

"We're located close to Canada here and I spent my summer weekends on the beach at Lake Erie, writing," she says. "I'd come back to town and upload my files into the QX-10 or call in to my bulletin board and upload articles that way. I think it's terrific."

Terrific though it may be, McCarthy admits that waiting for the machine to load a program or a file from the micro-cassette recorder can be annoying. The problem can be slightly circumvented by using the PX-8's ability to perform commands at given times.

"It takes about 15 minutes to load a 30K file (about 15 typed pages), which can seem a little slow at times," she says. "But there is a feature in the Geneva where it'll automatically run a program or a file at a certain time. I've used the feature when I wanted to do some telecommunications, and when I was ready, the program was ready for me."

Rather than rely upon the micro-cassette for all data storage, McCarthy uses the optional 120K disc RAM. "I like the smallness of it compared with the (micro-floppy) disc drive. I travel with my Hayes 1200 (modem) and my little P-40 printer and I'm all set."

Set, that is, unless she's trying to read the screen of the Geneva under dim light. In an airplane or in a dark room, the Geneva's display is nearly unreadable. McCarthy says she got around this difficulty by clipping a battery-powered mini-book light to the top of the LCD panel and "It's just perfect then."

Yes, the Geneva is just about perfect and although it will certainly face stiff competition in the next few months — there are rumored to be over a dozen new lap computer models making their debut within the next year — McCarthy thinks that the machine has a uniqueness that will keep consumer interest high.

"I think people will be coming out with different things, like an MS-DOS portable," she says. "Computers will become more specialized around certain things. The Geneva is unique because it has CP/M and Wordstar on a ROM chip." □

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This month, the intrepid Jina Bacarr visits the world of small business management. If your filing system is in a state of chaos, if your right hand doesn't know what your left hand is doing, if you're thinking of trashing all your papers and starting over, heed Jina's sage advice:

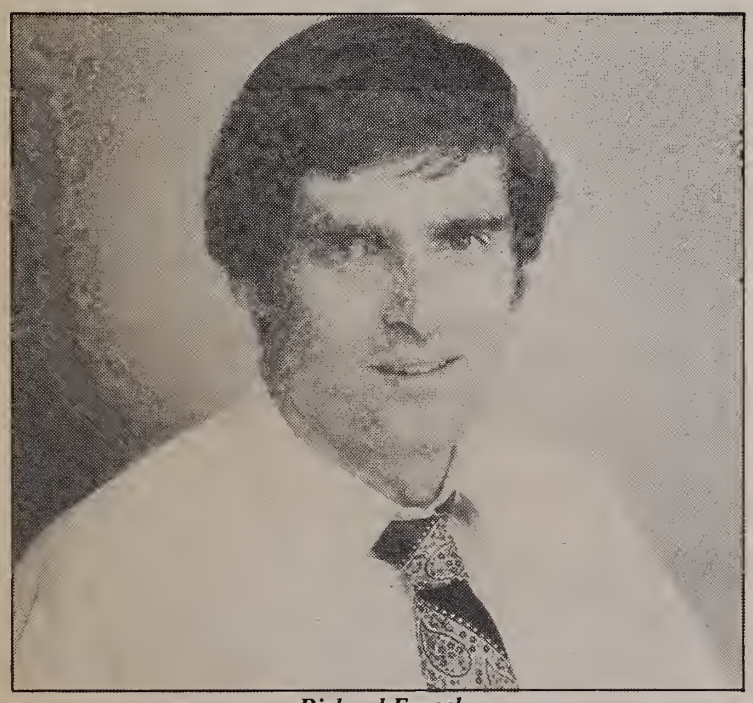
Don't Drop Your Drawers — Custom File *'Em!*

By Jina Bacarr

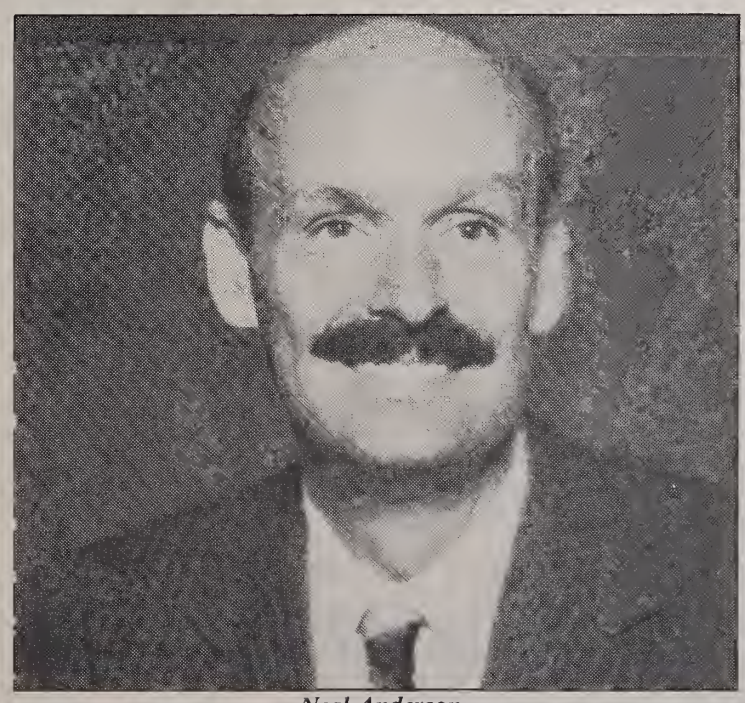
HENRY FORD DID IT and so did Ma Bell's little boy, Alexander. These men with a dream had more in common than celluloid collars — they were the last of a breed of entrepreneurs who single-handedly changed the scope of America when the letters IBM were still just part of the alphabet. These independent inventors were as tough as the buffalo, but just as expendable. They were the last of a vanishing breed.

Or were they?

Inventors Dick Fencel and Neal Anderson had a dream, and now, after nearly 1000 days of hard work, it's coming true. This fall, they're introducing *Custom File*, the revolutionary new information management system they designed specifically for the IBM PC and PC compatibles. This system will electronically store and retrieve all the information that normally sits in your file cabinet collecting dust instead of



Richard Fencel



Neal Anderson

revenues. These two tall, handsome engineers (you were expecting "Revenge of the Nerds"?) are ready to explode on the software market with more excitement than a couple of gremlins after a midnight snack.

Take Dick Fencel. He's a six foot five electrical engineer who can often be seen running on the beach near his Newport Beach apartment, but he's no stranger to the world of computers. As an engineering student at the University of California, Irvine, he was part of the computer revolution when "chips" were still something you munched on in front of the TV. After receiving his E.E. degree, he gained wide experience in test engineering (he worked for ITT and Texas Instruments, ultimately in software design and marketing of micro-processors). After working for several American firms, and armed with a knowledge of German and a summer course in Swedish, Dick headed for Europe, where he discovered the microcomputer market booming in Sweden. As his knowledge of Swedish increased, so did his knowledge of microcomputers. In no time he was hired by Texas Instruments to develop their European market. He also published material in Swedish engineering magazines regarding the state of the art.

During this time, another American adventurer was also combining travel and working for American companies in Sweden. Neal Anderson had answered the siren call of the Land of the Midnight Sun and was working for Honeywell in Stockholm when the two engineers met. Besides a common interest in the local color (blondes and otherwise), Neal and Dick soon found out they also shared an interest in the growing market of computer software. They soon realized that the future was back in the States where the home computer market was still in its infancy.

For Neal, that meant leaving the cold Swedish winters for the just-as-cold farmlands of Minnesota to work on his ideas. Before his sojourn in Europe, Neal had received his engineering degree from Auburn University in Alabama. When he returned home, he opened up his own engineering consulting firm, later deciding to use his talents to write software for Radio Shack. Imagine his surprise when he learned that his fellow traveler in Sweden was back in California and also writing software for the popular TRS - 80 microcomputer.

The two young men soon decided to combine their talents and go into business together. The big question was: which computer held the promise of being the leader? At this time, IBM had just announced its new personal computer; one look at the new machine convinced them that the IBM PC and its compatibles would be the best choice for the type of software they were designing.

After making AT&T stockholders a lot richer with their brainstorming phone calls between California and Minnesota, the designers of *Custom File* met each other halfway in Salt Lake to begin the program design. They started out by writing a vertical package specifically for the medical market. However, as they became more deeply involved in the flexibility of their design, they decided it would be better to design a general purpose data base system that could serve a variety of businesses, including personnel agencies, travel agencies, lawyers, small shops and factories — nearly everyone who has an inventory, accounts receivable, accounts payable, client lists and other related tasks.

Let's take a look at your business. With *Custom File*, your computer files can freely "relate" to one another, letting you systematically create an office procedure that leaves you free to concentrate on the main reason you're in business: to make money. By using *Custom File*'s ability as an information management system, you can make full use of the PC's 16 bit architecture, its standard data base functions, as well as do calculations, cross-file updating, custom menus and job streaming of

manual functions (no — it does not make coffee, but they're working on it). For example, *Custom File*'s data base can take a rather routine office procedure and take it off your hands. Suppose you receive an order for ten of your most popular items. *Custom File* automatically opens the file drawer called "PO" and inserts a new folder containing the customer's name, address and what he purchased. At the same time, your inventory file is opened and the folder containing the number of the items sold is automatically reduced by the number sold. Then, without you lifting a finger, both files are closed and neatly stored until needed again. (Personally, I also found it to be quite useful for keeping track of my dates, their phone numbers and anything else I might want to remember — or forget — about them.)

Another attraction is *Custom File*'s "memory based" approach to its data structure. Take overdue bills (not yours, your customers'). How much time do you lose trying to sort out receivables more than thirty days overdue? If you have a disk-based system, you're lucky if you lose only five minutes to this tiring task. But with *Custom File*, you barely have time to blink (about ten seconds) before you get the news.

Then suppose you're the doodling type. Get rid of that worn-out pencil and settle down to some serious artwork. You can draw and erase — at will — line/column graphics characters as well as reversing video, underlining or highlighting anywhere on the screen. Each form has the capacity for 80 columns in width and 128 lines in length (this is equivalent to the front and back side of a letter-sized sheet of paper). You can paint directly on the screen, eliminating the need for a separate data dictionary. This way you can design nearly exact re-creations of any existing paper forms you now use (no, it does not work on the centerfold in your locker at the gym).

You also have the feature of customized data entry (you decide the length of the field upon creation) as well as the mobility of moving freely on the screen monitor. And once you've toiled endlessly to input all this data there's no fear of losing it (the information, not your mind). Even during the worst electrical storm when the power on everything from your computer to your pencil sharpener goes out, *Custom File* "saves" the day. When you press a special key, all of the data written since the last "save" will be permanently written to disk.

Using the record management feature, *Custom File* operates the functions of searching, sorting and global editing using the data input form, and reports can be created in the same way you would create a data input form. In this way, selected data can be extracted from existing files and outputted to the screen, printer or both. And if that isn't enough, when you need advanced applications, you may use the BASIC interface. Then you can do extensive field calculations, cross file updating, custom menus and job streaming of manual functions (searching, sorting, reporting, etc.).

Sounds good, doesn't it? It is. Call Dick Fencel and Neal Anderson at Custom Data anytime. They have invested years of their lives and their personal resources in building their company. They placed their lives on hold when they gambled on designing a data base system that would fully exploit the advanced PC hardware by utilizing its expanded RAM and versatile keyboard and display. And they did it without the eye (or the pocketbook) of Big Business guiding their hand. In this way, they not only have kept alive an enterprising pioneer spirit, but were free to design a system to give the little guy a chance. From the small grocery store to the professional business office, *Custom File* provides to the user the high technical advantages usually allotted to mammoth corporations.

It's fast, flexible and provides a working harmony among the functions, cutting down on learning time by the user. From the new kid on the block to the veteran user, *Custom File* is adaptable to every need.

Dick and Neal are users themselves, and they remembered their own experiences when they created a data base system that goes beyond one-dimensional needs. They developed it with the highest technological advances possible after completing a thorough initial test market, working out minor bugs and fine tuning its special features until they had a product they knew would fit the needs of the computer software market.

Now it's ready to go, with four user diskettes and an operator's manual/user's guide included in the purchase price. And with it their story continues. The daring entrepreneurs make a good team: Dick handles the technical end while Neal is the marketing- and businessman. Neal still lives in Utah while Dick has returned to California to cover the Southwest for distribution of the software product. And they're both sharp computer engineers. They saw a need for something new, developed that need and are now willing to work just as hard to get it to the user looking for something more than can be found on the current market.

Like other innovators before them, their names are not household product words — yet. But *Custom File* is putting out the call and the computer market is responding.

Who knows? Their hard work could be part of *your* success too. Remember, the next time your file cabinets look like the Library of Congress after an earthquake, don't drop your drawers — *Custom File*'em! ■

Custom File *has a suggested retail of $150.00. For information, contact Custom Data, 1855 Sherington Place #M110, Newport Beach, CA 92663, (714) 631-8528.*

CUSTOM FILE, A TECHNICAL VIEW

Custom File is a memory based data-base-management-system (DBMS) that is designed to run on the IBM PC or other compatible systems. By "memory based," I mean that all of the data and the operating system are located in the system's volatile (RAM) memory. While this places an upper limit on the amount of available data that may be stored and manipulated by *Custom File*, what data you do have is accessed and manipulated with much greater speed than conventional disc-based DBMS systems. By comparison, a report or search that might take three to five minutes on a disc-based system such as dBase II would only take about 30 seconds on *Custom File*. This speed is especially useful to applications that require "on-line" style functions: e.g. medical facilities (for records and billing), laboratories (for collection, collation and study of research data), and various small business applications (for inventory control and billing).

One of the most important features of *Custom File* is its capability to quickly and easily develop forms and input data. By allowing almost any data base to be developed directly from the form, development and data input time are shortened considerably. The numerous "help" prompts make form development easy even for a novice. I was able to develop a complex relational data-base form in just five minutes with only the help from the system. This ease of operation should help make the package even more attractive to first-time DBMS customers and users.

Richard Fencel, one of the system's designers, hopes that the program falls into a market niche that will allow it to be productive in a number of environments.

— John Gresham

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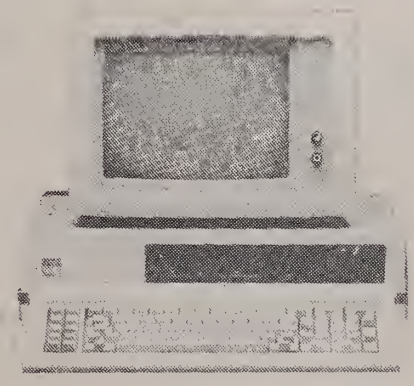

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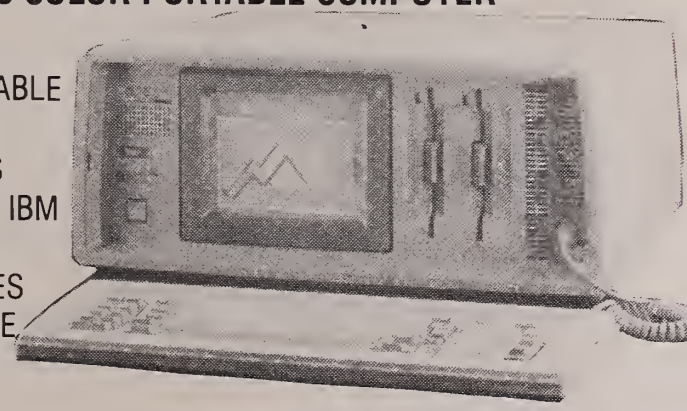

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COMPUTER COTTAGES

The Lifestyle of the '80s?

By Pat Hamilton
CDC interview by John Gresham

MORNING COMMUTE GETTING YOU DOWN? Is your employer's dress code driving you to the poorhouse? Your sitter can't make it *again*?

Thanks to innovations in the field of computers and telecommunications, these problems may soon be a thing of the past to many American workers. Many companies are finding it advantageous to have their employees travel to work via computer, adding to the language the concept of "telecommuting." The pilot programs are few, but significant, and there is a real possibility that telecommuting will change the lives of Americans as radically as the automobile did some 50 years ago.

Currently, most telecommuters are part-timers. However, Control Data Corporation (based locally in San Diego and Orange Counties) initiated a full-time telecommuting program for handicapped workers at their corporate headquarters in Minneapolis, Minnesota. Ralph McCrae, Program Manager for the "Homework" program, discussed it with MICROTIMES.

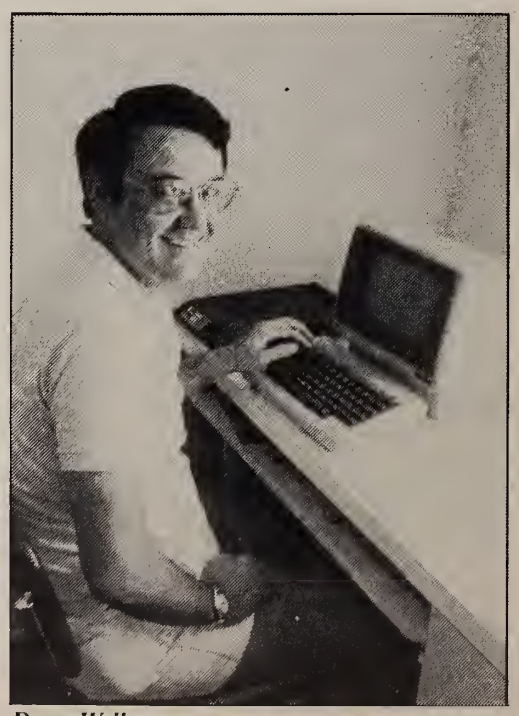
"Homework" became a reality in 1978 after CDC suffered a series of disabling injuries and illnesses among their senior executives. These executives could not return to their normal jobs, so CDC designed a pilot program around PLATO, a computer-based self-study education network, which allowed people to train in their homes for later job placement. The object was to train the 14 people involved in the pilot project as course designers or developers who, McCrae says, would "take the design requirements from our course of operations organization and produce a computer-based course." The training took about nine months and was completed in late 1979. Nine of the original group have just celebrated their fifth year of full-time home-based work.

CDC learned a lot about delivering their programming curriculum remotely to students. They also learned a lot about managing people and retraining their managers. McCrae agreed that our "culture is designed to accommodate large, central factories, be they manufacturing facilities or office facilities. . . We managers develop a lot of bad habits when the staff is clustered about us, because if we don't do things precisely or consistently, all they have to do is yell across the hallway and get clarification."

According to McCrae, managers were "technically trained to a point where it was ridiculous, but as far as human relations or communications or some of the skills that were ultimately more important for dealing with their new responsibilities — that is, managing people — they were woefully ill-prepared." CDC learned that when "dealing with remote employees, you are forced to do things that you should probably be doing anyway." Communication has to be better when dealing over the phone, as you are unable to pick up non-verbal nuances from the person you're dealing with. You must establish trust and a mutually beneficial relationship with your homeworkers, McCrae says, so that they "will be inclined to work as effectively as if you were standing there watching over their shoulder."

To put the plan to the test, 14 of the most severely disabled employees were chosen to participate in the pilot program. They included paraplegics, quadriplegics, and persons suffering from severe heart diseases, and came from diverse backgrounds.

CDC found that they could train the business applications programming disciplines just as well as their educational (PLATO) programming. According to McCrae, "We didn't want to reinvent the wheel, so we got together with a number of people with related interests and chose certain things to do."These things now include placement of 90% of their program graduates and referrals from large insurance and workers' compensation carriers.



Doug Walker

The only real requirements for entry into CDC's program is that the worker's health should be stable and that he or she feels good about himself or herself and wants to learn. CDC also gives applicants an entrance exam prior to entry into the program. In following their graduates, CDC states that often the worker's health status improved drastically and "medical visits dropped dramatically." The hope at CDC is that the Homework concept will prove effective on a large scale in providing greater job flexibility and energy savings.

The telecommuting concept is also useful for non-handicapped employees; the benefits include accessing mainframes on off-hours for better efficiency, elimination of commuting costs and time, and reduced overhead expenses such as clothing, gasoline and food. The ability to run an office at home on flextime is advantageous for other employees.

One such employee is Doug Walker, a senior systems analyst for General Medical Centers, a health maintenance organization located in Anaheim, California. Walker is in charge of keeping the computer up and running, developing new software, repairing the old software, and occasionally maintaining hardware. General Medical's computers are used for membership tracking and accounts payable. They use two kinds of telecommunications links — direct lease-line connections to clinics (to display eligibility information to each clinic from a central data base) and dial-up lines for programmers to use from their homes. Walker says that dial-up lines are used "in case there are any problems during the weekend or late at night which require a programmer's intervention to keep the machine running; he can just dial in, look at the problem, and usually repair it instead of having to drive all the way in to work."

General Medical Centers has been using this limited work-at-home program for approximately two years. Walker uses a Hewlett-Packard 2382 terminal at home to

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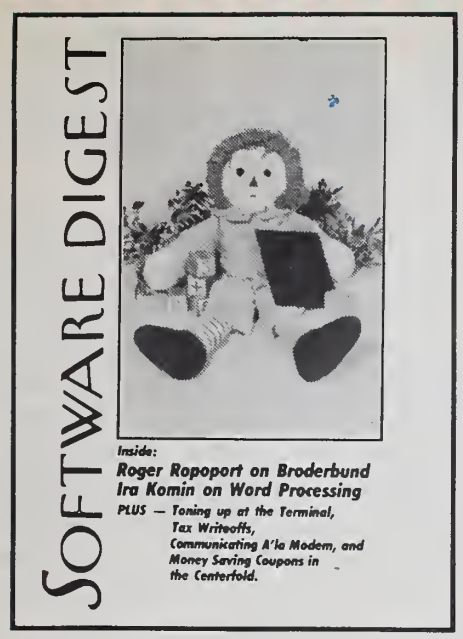
SOFTWARE DIGEST
Inside:
Roger Ropoport on Broderbund
Ira Komin on Word Processing
PLUS — Toning up at the Terminal, Tax Writeoffs, Communicating A'la Modem, and Money Saving Coupons in the Centerfold.

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SPREADSHEETS, from TAXES to DIETS

by David DeLancie

How would you like to own a piece of software that can straighten out your taxes, keep you on your diet, plan your family budget and maintain a holiday card and gift list?

Relax, it's not one of those hot new super-integrated high-tech software packages. And it's not going to cost you an arm and a leg. In fact, there's a good chance you already own it.

It's the tried and true spreadsheet—the least understood and most under-utilized type of micro computer software. The uses of a spreadsheet are limited only by your imagination, since the programming allows you to create whatever type of software program you desire.

Basically, a spreadsheet allows you to enter information into "cells" that are arranged in a rectangular array of rows and columns on your computer screen. You can enter text, numbers or a combination of the two, depending on your program. Most spreadsheets allow you to adjust cell width and data formats to achieve a neatly organized display on your terminal or printer.

With spreadsheet software, your computer becomes a sophisticated calculator, enabling you to add, subtract, divide, multiply or average out the data you have input. Unlike calculators, spreadsheets allow you to keep a permanent and ongoing record of information which you can update with a punch of a key.

At tax time, this means setting up a spreadsheet to mimic your 1040A so that all you have to do is enter the raw figures and let the computer handle the computations and line carry-overs.

Some programs can transfer data between different files. With this type of feature, you can link your checkbook, expense account and medical expenses directly to your tax computation files.

For the dieter who doesn't seem to have the time—or inspiration—to count calories, the spreadsheet is the ticket. The program can easily be set up to calculate your daily caloric intake, based on the information you enter on what and how much you ate. Taken a step further, the program could develop a general forecast for your future weight loss or gain, based on your daily exercise, your basal metabolic rate and other factors.

Spreadsheets can become an indispensable aid in organizing your personal finances. You can transfer your checking account information onto the screen and set up columns for the check number, date, amount and payee, as well as deposits, service charges, electronic transactions and so forth.

If you have a yen to budget, you can make additional expense allocation columns, which the spreadsheet can total and compare against budgetted amounts.

A spreadsheet can be a wonderful timesaver when creating gift lists and greeting card lists. You can organize by recipient's names, gift categories or stores where purchase will be made, figuring in price, quantity and other elements. The lists can be updated throughout the year and after the holiday season, for those who like to keep records of cards and gifts received. And at the push of a button, you can get an idea of how much this year's good cheer will cost you.

One of the best things about a spreadsheet is that once it's set up, you can vary the input at will and watch the effect on the "bottom line."

It allows you to play the "what if" game, aiding you in plotting the best strategy for tax returns, diets and all kinds of expenditures.

When the first spreadsheet, Visicorp's Visicalc, was introduced in 1979, it helped launch the personal computer revolution.

Lotus 1-2-3, an integrated software package that includes a spreadsheet program, is currently the most poplular business software in the country.

THE GAME OF BRODERBUND by Roger Rapoport

Here's a recipe for disaster in the computer software business. Two brothers and a sister with no experience in the industry team up with a couple of starry-eyed programmers — Result? In less than four years they're making $2.5 million a month.

From opening day, the unlikely San Rafael-based brother-sister team has broken many of the major rules in the compter business.

They came out with inexpensive, trimmed-down products like Bank Street Writer while the competition was busy trying to crank out every last bit of performance from the more powerful, expensive word processors. They payed royalties well above industry average. And they focused on disk-based software when the big money was supposed to be in cartridges.

Their software games line was the biggest hit of all. In the early days they banked on such dubious concepts as a helicopter pilot trying to recover sixty-four delegates to the United Nations Conference on Peace and Childrearing. The result: Award-winning, best-selling "Choplifter."

To the surprise of industry experts and many noted software critics, Doug, Gary and Cathy Carlstons' brainchild continues to soar on the strength of hit after hit. Sales are well past the million-a-month—more than doubling last year's figures.

"None of us had any background in running a business," admits Gary Carlston, Broderbund's 33-year-old vice president of product planning. A Harvard graduate in Scandinavian Literature, he coached women's basketball in Sweden, taught Swedish at the University of Washington, ran the Oregon March of Dimes, and failed to make money selling reflectorized bike safety equipment before turning to the software business.

The catalyst was his brother and Broderbund president, Doug Carlston, 37. His initial training came at Harvard, where he helped work his way through school as a programmer at the Alken Computation Lab. After taking his law degree from Harvard, Carlston joined a Chicago firm. Everything changed in 1979, when he spotted a home computer in a shop window and was "bitten by the bug."

Doug wrote a couple of game programs including Galactic Saga for the TRS-80. By the following year he was making $1,000 a month in royalties and decided to open Broderbund (brotherhood, in Swedish) in Eugene, Oregon. In 1981 the company, with sister Cathy doing Public Relations, moved to San Rafael.

Quickly branching out from its two software lines for the TRS-80, legal support products and strategy games, the company had its first big hit with Alien Rain. This game was the first product to outsell VisiCalc on the Apple. Then came Dan Gorlin's Choplifter, the number one best seller for 1982 on the Softsel recreation chart.

The following year, a University of Washington math major, Doug Smith, submitted a new strategy game he had written for friends called Lode Runner to three leading producers of computer games, including Broderbund. Everyone wanted it and he signed with the San Rafael firm. Although the company does not offer big advances, a standard 15% royalty, floating as high as 30% in some cases, attracts first rate talent.

Today, with 600,000 copies sold, "Lode Runner has generated more royalties for its author than any disk-based game in industry history," says Gary.

With two dozen games out for the Apple, Commodore 64, IBM PC, and Atari, Broderbund now has numerous other success stories in the game market. David Snider's David's Midnight Magic is a first-rate game for the pinball fan. Drol and Spare Change are particularly good for the younger player, Serpentine is one of those challenging games that never gets boring, and with Arcade Machine, users get a chance to build their own video game from scratch.

Today, with a permanent staff of eighty-five supplemented by thirty-five temporary employees, Broderbund is also doing well in the personal productivity market. Bank Street Writer, developed by the Bank Street College of Education, is number one in the home word processing market.

Originally developed by the college as a teaching tool, it was picked up by many first-time computer users. They found its easy-to-learn format a welcome alternative to the complex command sequences of more sophisticated word processing software. At $69.95, the program represented a significant pricing breakthrough.

Like many of Broderbund's productivity packages, this one is self-prompting and offers an on-screen tutorial. "I have a short attention span and can't read documentation," says Gary. "This is software that people can use without having to fight their way through a manual."

Although manuals are useful for Broderbund software users, they are not mandatory. This could explain the company's latest success, a $49.95 package that lets the users write, design and print their own greeting cards, stationery, letterhead, signs and banners.

"When we went to work on this, the experts were skeptical," says Gary. "They said, 'Who needs another greeting card program'?"The runaway success of this product (sales are expected to hit 100,000 this year) once again validates the Broderbund strategy: low cost and ease of use. By simply following the on-screen prompts, even a child can print out birthday cards and do drawings and banners. "It's an ideal product for the person who didn't know why they bought a computer. With programs like these we're telling them 'you got a computer because it's fun and you want to be productive'."

Through its expanding line of games and personal productivity and educational software, Broderbund has outperformed many firms that started with better funding and more experienced managers. "A business degree isn't much help when you're working with creative people," says Gary.

"Big companies," he continued, " have had a terrible time figuring out that programmers don't want to work 9 to 5. They prefer to work when the creative juices flow. We've been fortunate in working with a pool of loyal and very talented designers."

THE NEW TAX GUIDELINES by Dakota Lane

Is Your Personal Computer Deductible?

Doctors, stockbrokers, clothing designers, writers you name it—they're all going to cash in on the new Tax Reform Act of 1984 and claim their home computers as business deductions.

Depending on the cost of the computer, the date it was purchased and the amount and type of usage it has received, deductions and tax credits of thousands of dollars are possible under the new law. And some big errors are possible as well. So make sure you check with your tax consultant to see what benefits you are entitled to.

Bay Area CPA, Ed Robinson, said the stiff new guidelines covering business deductions for computers put into use after last June 18 are indicative of the new upsurge in home computer use for business purposes. Last year, five people came to his Newark, California office looking for a tax break in connection with their home computer, Robinson reports. "This year fifty people must have called me." They were mostly professionals, from a variety of backgrounds, he says.

Each write-off will vary from individual to individual, Robinson says. "The route we will take depends on their income this year and their projected income for the next few years. We'll be taking into consideration possible changes in the tax laws, and we'll be exploring all their options."

There are a variety of options available for the home computer user looking for a tax break, ranging from tax credits to a $5,000 first year write-off bonus.

The new federal law is kindest to those who use their computer full-time for business purposes. Which means that even if the computer is in use for only one hour a day, if that hour is spent creating taxable income, the computer user is probably eligible for full deductions or credits. If that hour is spent learning French or playing ZORK III, the user is probably out of luck.

Home computers are usually used for both business and leisure purposes.

When that's the case, the Internal Revenue Service awards tax benefits only for the portion of time the machine is in business use. If the computer is used half the time for business, the user reaps only half the tax benefits.

An aspect of the Tax Reform Act designed to protect both IRS and the home computer user, is the mandatory log users must maintain, indicating amount of business time spent on the computer. "Last year," Robinson says, "there was no real diary needed. If IRS asked for substantiation, whatever you said held up in court."

In 1985, taxpayers will be penalized if they are unable to back up their computer deductions with logs.

Type of business must be documented, as well. A home computer does not qualify for being a business computer unless the computer is required by an employer. When you are your own employer, operating a legitimate part of full-time business, there shouldn't be any problem.

Tax benefits vary, depending on the user's qualifications.

One of the best ways to recover your investment is through an annual tax deduction for depreciation. The cost of the computer is divided up by IRS-supplied percentages and spread over the estimated period of the computer's useful life.

Under Federal law, a computer used for business more than half the time can be depreciated over a five-year period, says Robinson. That's fifteen percent of its allocable cost the first year, twenty-two percent the second year and twenty-one percent the next three years.

Under California guidelines, a six-year depreciation is suggested. But if you want to seek a faster depreciation, according to the California Franchise Tax Board, you can claim the computer's useful life will be as short as one year. Conversely, if you'd like to stretch the deductions out longer than five years, for as much as even twenty years, you can also do so—just as long as you can justify a slower or faster depreciation rate.

Given a choice, most people would forego a tax deduction, even at these rapid depreciation rates, if they knew they could secure a tax credit.

While a deduction reduces the amount of income on which your final tax is based, a tax credit reduces the tax itself. Every dollar you are credited will be a dollar you won't have to pay.

Fortunately, it's not usually a case of taking one over the other. Most business computer users are eligible for a tax credit for up to as much as ten percent of the amount spent on the computer, in addition to the depreciation deduction. When a tax credit is received, however, the depreciation deduction is slightly lowered.

Still, as Robinson indicates, there are many routes to go in the tax business. Instead of reducing the depreciation value of the computer, the taxpayer may opt to reduce the tax credit itself—usually by two percentage points.

Another alternative is to forego the depreciation deduction and tax credit and seek a first year write-off of up to $5,000. If you are eligible to write off the total cost of your computer, and the cost surpasses the $5,000 maximum, you can take the amount over $5,000 and use that to apply for the depreciation and investment credit.

And of course, you can figure out the best way to use your options and pay your taxes on your home computer. Only don't log it as business.

Toning-Up At The Terminals

Introduction

by Denise Austin, exercise physiology specialist

Numerous studies have shown conclusively that appropriate exercise improves the ability to relax, both immediately and over a sustained period. Findings indicate that a relaxed person works and thinks more efficiently. It has been noted that physical activity increases circulation through the body and exercising helps all the brain cells receive the nutrients they need. Increased circulation through exercise can reduce or eliminate "nervous fatigue," as well as improve memory and cognition.

During a hectic day, your muscles store up tension. This tension can lead to back pain, stiff neck or tension headaches. If muscles are not given relief from tension by relaxation, exercises or change of activity, the muscle fibers physiologically "adapt" to the states of increased tension. The tension can be released by purposeful exercises and you can select the exercises that fit your individual needs.

The exercises illustrated in TONE UP AT THE TERMINALS can be done at your work station in a matter of minutes. No special skills or athletic abilities are required. You can even try them at home or on the train, plane or bus. Better still, do the exercises while you're watching TV.

For best results, supplement them with a balanced program of regular cardiovascular conditioning, muscular flexibility, strength training and sound nutrition.

Warm Up Exercises

Shake: *Loosen up by moving your neck, shoulders, arms, thighs, legs and feet. Promotes blood circulation through the body.*

Reach: *Slowly raise your arms and draw the stomach fully in. Then let your arms drop. Repeat twice. A good stretch for the rib cage and can help posture.*

Deep Breathing: *Close your eyes and direct your attention to the breathing process. Think of nothing but your breathing. Inhale deeply through the nose and exhale forcefully out the mouth. Repeat six times. Benefit – Aids in relaxing and reducing tension.*

Tensing the Muscles: *Most people generally have very little awareness of the sensation of relaxation. Therefore, you must first produce tension sensations, then slowly release them. This will allow you to feel the difference internally between tension and relaxation.*

Eyestrain Tips

- *Take visual breaks every two to three minutes, more frequent if your work is intense. Relax your eyes by changing focus and look away into the distance.*
- *If you have other tasks that don't require work at your video display terminal, vary the tasks to eliminate long periods at your terminal.*
- *Make a point to consciously blink and take deep breaths. Sometimes intense work can prevent you from proper breathing and regular blinking.*
- *If you wear glasses and have a sensitivity to glare or flicker, a tint in your lenses can be helpful.*
- *Consider using a terminal screen with a light background and dark characters or a polarizing filter that mounts on your screen and deflects glare.*

**Information courtesy of Vision Care Clinic, San Jose, CA.*

Pectoral Stretch

Grasp your hands behind your neck and press your elbows back as far as you can. Return to starting position, then drop arms and relax. Repeat. Benefit – Good stretch to do when you find yourself slouching. Stretches the front of your chest.

Side Stretch

Interlace your fingers. Lift your arms up over your head keeping your elbows straight. Press your arms backwards as far as you can. Then slowly lean first to the left and then to the right until you can feel the stretch along the sides of your body. Benefit – Will stretch the muscles along side of your body from your arm to your hips.

Shoulder Roll

Slowly roll your shoulders forward five times in a circular motion using your full range of movement. Then roll your shoulders backward with the same circular motion. Benefit – Releases nervous tension buildup in neck and shoulders.

Neck

Let your head drop slowly to the left, then to the right. Slowly drop your chin to your chest and then raise your chin as high as you can. Turn your head all the way to the left, return it to the normal position and then turn your head all the way to the right. Return to normal position. Benefit – Stimulates the neck muscles to alleviate a stiff neck.

Shoulder Stretch

Bring your right hand to your upper back from above. Bring your left hand to your upper back from below and hook fingers of your two hands. Repeat to the other side. Benefit – It reduces tension and increases flexibility.

Arm Circles

Raise your arms out to the side with your elbows straight. Slowly rotate your arms in small circles forward and then backward. Benefit – To increase joint mobility in the shoulders.

Upper Back Stretch

Sit on a chair with your hands on your shoulders. Try to cross your elbows in front of you until you feel the stretch across your upper back. Return to starting position, drop your hands, relax. Repeat. Benefit – Reduce muscle stiffness of the upper back.

Back Relaxer

Sit on chair. Drop your neck, your shoulders and your arms, then bend down between your knees, as far as you can. Return to upright position, straighten out and relax. Benefit – This will take pressure off your lower back.

Trunk Twists

Turn at your trunk. Turn your head in the direction of your trunk. Twist 3 times in each direction. Benefit – Excellent for trimming the waistline and improving flexibility.

Derrière Firmer

Place hands on chair, feet flat on the floor, and lift your hips and buttocks up. Tighten your buttocks. Hold for five seconds, then sit back and relax. Repeat twice. Benefit – To firm and tone your legs and buttocks.

Middle-Upper Back Stretch

Hold your right arm just above the elbow with your left hand. Now gently pull your elbow toward your left shoulder as you feel the stretch. Hold stretch for 5 seconds. Do both sides. Benefit – To stretch and increase flexibility of the middle-upper back.

Wrist Flex

Put your elbow on a table with your hand raised. With your other hand, hyperextend your wrist to bend your hand so that the back of your hand is aiming to the top of your forearm. Repeat with opposite hand. Benefit – This releases tension in your hand and wrist.

For Your Arms

Bend your elbows, parallel to the floor, fingers in front of chest. Then push arms way out to the sides with arms straight. (Try to push arms as far as possible.) Repeat 5 times. Keep firm. Benefit – Tones the muscles of the arms.

Hug Yourself

Cross arms in front of chest and reach fingertips towards your shoulder blades. Benefit – Relieves tension from shoulders and upper back.

How to buy a computer: Step one.

Start with your software.

That's what you're getting a computer for in the first place. Not for the box and keyboard, but for the work your system can do. And that's where we come in.

As independent software dealers, we can give you an unbiased, professional assessment of your micro-computing needs and match you up with the right total system solution. We're the Softwaire Centre stores of Northern California, ready to serve you before and after you buy your computer.

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SUNNYVALE
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Softwaire Centre of Sunnyvale

Northern California Softwaire Centres Solid Gold List

Business

DBase III	Ashton Tate	IBM,Apple CPM
1-2-3	Lotus	IBM, TI, Wang
Microsoft Project	Microsoft	IBM
Symphony	Lotus	IBM
Framework	Ashton-Tate	IBM
Multimate	Multimate	IBM, TI
Sidekick	Borland	IBM
Word Perfect	Satellite	IBM, TI, DEC
PFS Write	Software Pub	Apple, DEC, IBM, TI
Chart	Microsoft	Mac, IBM
PFS File	Software Pub	Mac ,Apple, IBM, TI

Home

Print Shop	Broderbund	Apple ,C64
Managing Your Money	Micro Educ.	IBM
Micro Cookbook	Virtual Comb.	Apple, IBM ,C64
Bank Street Writer	Broderbund	Apple, IBM, C64, Atari

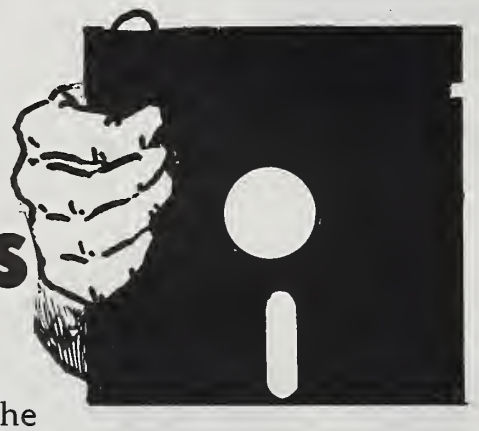
Recreation

Flight Simulator	Sublogic Micro	Apple, Atari, C64 ,IBM
Zork III	Infocom	Apple, IBM, TRS, Mac, TI, C64
Ultima III	Sierra On-Line	C64, Apple, Atari, IBM
Trivia Fever	Profess'l Soft.	C64, Apple, IBM ,Mac
Gato	Spectrum Holo	IBM

Education

S.A.T. Study	Barrons	C64, Apple, IBM
Typing Tutor III	Simon & Schuster	Apple, C64, IBM
Math Blaster	Davidson & Assoc.	IBM, C64, Apple
Word Attack	Davidson & Assoc.	IBM, C64, Apple

The Buck Starts Here



While all the powerful new machines get the headlines, your real investment in computing starts right here. With a little floppy disk.

Whether you're using your system to master the S.A.T. or download data from your corporate mainframe, the heart of your computer is software. And when you think software, you have to think Softwaire Centre.

Our approach is simple. We work with you in the beginning, before you spend a lot of money on a system that may not deliver for you. And we say with you every step of the way to make sure the software you buy from us does everything we say it does, or we'll find some that does.

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Softwaire Centre

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SOFTSPOKEN

by Dave Forncrook

Softwaire Centre of Sunnyvale is your one-stop shopping center for computer needs—before you buy that computer or after you have it up and running in your home or office.

Located on El Camino right near the Black Angus Restaurant, the store is convenient to shoppers throughout the South Peninsula. In the past two years, Softwaire Centre of Sunnyvale has built its reputation on service and follow-through.

Our business and technical representatives will take the time to be certain your micro-computer needs are matched with the capabilities of available software packages. We will help you select the optimum software to meet your needs, demo that software for you and *guarantee* the software you buy from us does everthing we told you it would—or we'll find some that does.

And if your needs are recreational or educational, Softwaire Centre of Sunnyvale has the solution for you as well—walls and walls of best-selling and often hard-to-get software plus racks of computing books and

Holiday Checklist

Under $10

Mouse house
Diskette holders
Magazines
Disk Jockey
Disk labels
Gift certificates

Around $25

Disk-drive cleaners
Covers
Books
Pinfeed paper
Surge protectors
Gift certificates

$50 or so

Games
Educational software
Joysticks
Utility programs
Dow Jones Subscription
CompuServe
Gift certificates

$100 and Up

Personal finance packages
Basic word processors
Spelling checkers
Hard disk storage
Printers
Modems
Multifunction boards
Presentation master
Gift certificates

What size shoe does your best friend's computer wear?

Before you come shopping for that computer related gift, it might be helpful for you to get the following information about the system you plan to enhance:

Computer name and model.....
Monitor type: Color ☐ Composite ☐ RGB ☐
Monochrome ☐
Printer name and type.....

Total system memory .....K
Number of disk drives ..... Hard disk?

Special interests: .....

magazines. Our supply department stocks everything you need to keep your system up and running—paper, disks, files, add-on memory, complete communications packages—you name it.

Business or pleasure, our systems approach to software coupled with a professional staff of representatives and consultants is designed to see you get the best possible solution to your data processing needs—not just a piece of one.

After you've made your purchase you'll see why Softwaire Centre of Sunnyvale has such a strong reputation in the community. More than our ironclad guarantee, we make sure your software choice is supported. We don't send you out the door with boxes of disks and some complicated manuals. We stay with you—on the phone or in person—to answer your questions.

For businesses, we have worked out special arrangements for on-site training seminars for key staff people.

We're determined to be your computer general store and offer the reliability, experience, and diversity of stock to back up that goal.

This Holiday Season take advantage of our many special offers and convenient shopping location and come in and see for yourself just how easy it is to outfit your micro-computer . . . or find that special gift. The Softwaire Centre of Sunnyvale—all the store your computer ever needs.

Come to the Faire

Make merrie with software this Holiday Season by giving a gift that lasts for all seasons. We have an array of gifts for every taste and every pocket, gifts that will go on working all year long — and for years to come. In addition to our special sales you'll find stocking stuffers and chart busters, books and tools, accessories and furnishings and a bright warm smile to add warmth to your Christmas shopping.

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Hayes Smartmodem B $509

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software clearance up to 70% off

Have a D Base III for only $450

($250 for DBase II plus $200 for upgrade)

Demo Equipment Sale

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Xerox 820 with 8" Disk Drive $2,500
Brother HR-1 Letter Quality Printer $450

All offers contained herein are subject to stock on hand an expire December 31, 1984. In most cases, coupons cannot b used in combination with other special sales or offers.

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I LOVE MY KAYPRO

by Ira Kamin

Everyone wants a word processor now. Even the most old-fashioned, typewriter-oriented souls—the ones who think old black Underwoods and great literature belong together forever—are buying word processors. Or wondering if they should buy word processors.

"Are they really bad for the eyes?" they ask, staring at the screens. "Are they hard to learn?" they say, staring at the keyboards. Pushed into the idea of purchasing a computer by a husband, wife, son, daughter, boss, cousin, brother, neighbor, friend, or maybe even an enemy, the old stalwart scholars and writers and poets now envision themselves wrapped comfortably in the modern world of print-outs and memory banks. They see themselves sitting at home forever, gazing through the window at a tulip in the garden, while their screens fill magically up with prose that somehow transmits itself to the office where they never felt they belonged, and now never have to enter again. Everyone is saying how much easier it is to write on the screen, how much fun it is, how convenient it is, and how inevitable it is.

I never really trusted computers. Yes, perhaps they are more convenient, and yes, with the right boss you could probably never leave your house again. But chances are your boss will want to see your face anyway and chances are you'll never learn how to use and operate the machine properly. You'll find one hundred ways to make writing on a word processor more difficult and ornery than it has to be.

I thought I could hold out forever. I worked for the S.F. Examiner, and even when the whole newspaper switched from IBM Selectrics—which were difficult enough—to word processors, I resisted. There always seemed to be one more person than word processor, and I always managed to be that one extra person who was without a machine.

A friend of mine at work tried to teach me how to use the program three times, and each time I took a bunch of notes and each time I lost the notes. I hated the silence of the computer anyway. In less than a week the newspaper went from a pounding riot to a whispery mess. In less than a week it went from a newspaper ofice to an insurance office. It advanced one hundred years in seventy-two hours.

I hated the new office and the machines too. I kept hearing about stories getting completely lost in the system. And then you'd hear an ominous voice being gassed through the entire office: "The computers would be down from two until three this afternoon," to correct some mysterious error.

The more my colleagues learned the machines, the worse it all became. They were falling in love with people in other cities, by computer, and they were writing porn in their off hours, storing it forever in the vast newspaper memory bank. I started to feel powerless, because other people had to "input" my stories into the system. (Yech, how I hate those words, "input" and "system.")

And why not feel powerless? In the system you had no privacy. Anybody could just plug right into your words and find out what kind of moronic gibberish you were passing off as prose this week.

Wordstar 2000 Plus is Here!

What may be the ultimate in word processing systems, Wordstar 2000 Plus from MicroPro has just arrived at Softwaire Centre stores. This professional system incorporates all the advanced features of WordStar 2000 but includes telecommunication and an easy-to-use mailing list management system.

Wordstar 2000 Plus has the telecommunications capabilities to let you send documents via electronic mail — and put you in touch with all the popular information services. And the built-in mailing list feature lets you create a database, update, sort and select its contents and then print mailing labels, envelopes and form letters.

There's lots more in this product — like windows and format sheets, keystroke glossaries and math options. But see for yourself if this isn't the ultimate Holiday gift — for all the words somebody is going to write next year.

And, no, it won't run on the Kaypro. You need an IBM PC or lookalike with 256K RAM, a minimum of two floppy drives and a Hayes Smartmodem or fully compatible modem to run Wordstar 2000 Plus.

Up to the day I quit the newspaper, after five years on the job, I had never even put a finger on a word processor, and I was proud of it.

After my unemployment ran out I wound up at my current job—in an office full of Kaypros. There are people at the job, too, and I am still a writer, but I finally caved in and learned the machine. My teacher was an Orthodox rabbi who never removed his hat during the lesson, so I knew there was something other-worldly about the whole experience anyway.

I was right. Computers are just as horrible as typewriters in their own way. True, computers talk to you. They send you these little messages, usually question marks or pieces of the alphabet that don't make sense at all.

But, eventually, I succumbed. I got hooked on my word processor. In a way it is a dream come true. It's fun. It's convenient. It's inevitable.

Now I have a sticker on my car which proudly tells the people in the traffic behind me how much I (heart) my Kaypro. Somebody honked and waved at me on the freeway one day and it took me an hour to realize it probably wasn't a fan but an employee of a computer firm. Or a fellow word processing junkie.

I love my Kaypro.

Used Software Sale!

We've got a store full of the most widely used software in the world. And lots of new releases that are just now climbing the best-selling charts.

Whether you want to get down to business with Framework or Symphony, it's easy as 1-2-3 at the Software Centre stores of Northern California. (One piece of software that gets a lot of use in our stores is the demonstration copy we use to take our customers through a program — before they buy.)

But, we're not all business. We have software for education and software for recreation. As well as books and magazines to help expand practical usage of software systems.

And we're not even all software. Think of the pounding our printers take and the data that passes through our modems and communications packages, the twisting and turning suffered by our joysticks.

In fact, all the products at The Software Centres of Northern California have one thing in common. They get used because, one way or another, they're useful. Come down to our place and see for yourself.

Our friendly, experienced people will be happy to help you make the right selection of your own most used software.

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COMMUNICATION À LA MODEM

by Richard L. Wright

If you catch your teenager's computer talking to the Source, don't panic. Your home hasn't been turned into a bookie joint and you haven't found yourself on the set of a Spielberg movie. Your teenager's computer is probably just trying to get the kid a date.

Computer dating is just one of several services offered through the Source, one of the many nationwide on-line systems designed for personal computer users.

Once your computer is set up to communicate with another computer, the "talk" possibilities are nearly limitless.

With the right hardware, your computer can talk to Dow Jones, obtaining a full range of current information about current financial market activity.

Your computer can talk to commercial database systems like the Lockheed Dialog system, which features hundreds of highly specific sources, ranging from standard files like books in print or the consumer price index, to esoterica such as "world alumnium extracts" or "exceptional child education services."

And if your computer's hooked up to the Source or Compuserve, services include such things as electronic mail, a CB simulator, on-line dating, movie reviews, electronic shopping, advice to the love-lorn and national news stories.

In order to do any of the above, your computer needs some special purpose hardware called a modem (an acronym for MOdulator/DEmodulator), and some communications software.

The modem is a device which connects to your telephone line and converts the electronic information in your computer into sequences of high pitched tones (modulation) so that it can be heard by another modem at the other end of the line.

Some computers have built-in modems (many portables like the Radio Shack 100 have this feature). Others have "slots" (such as the IBM PC), into which one can install an internal modem. If your computer has neither of these features, it can be attached to an external modem through what is called an RS-232 serial port.

Assuming that your modem is installed and operational, you still have to install the communications software, which actually lets you do something with your modem. Your software must be specifically designed to function with your brand of modem.

What does communications software do? At a minimum it must do the following: It should be able to simulate a "dumb terminal" whereby each keystroke you enter is directly transmitted over the phone line; It should be able to automatically transmit files which already exist in your computer over the phone line; and it should receive files from the other end.

As is the case with most computer applications, your choice of the right hardware-software package should be dictated by the intended application. Try to arrange a hands-on trial of the complete system, set up exactly as it will be when you buy it, and then go ahead and log on to Compuserve or the Source or whatever it is you intend to do.

When the communications package is doing what you expected it would, take it home and plug in, turn on and dial out!

GOT YOUR EARS ON BIG BUDDY?

by William O. Beeman

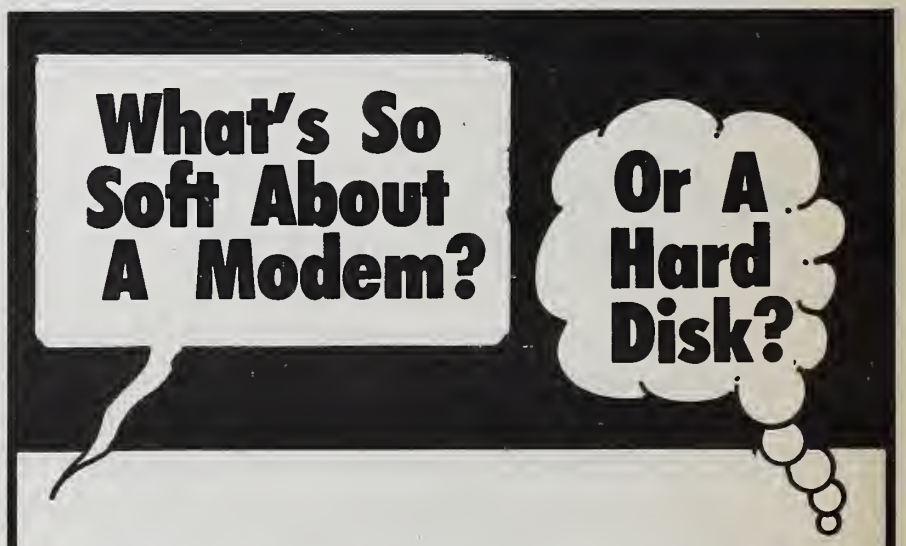
Pacific News Service

Just when you thought you heard the last of "What's Your Handle" along comes a new wrinkle. Now you can use your modem, communications software and your telephone to chat until dawn with friends throughout the United States using CB Simulation.

Computer CB is a new form of communication in America. It offers the immediacy of a telephone call with the anonymity of a written communication. The transmission can be stored permanently on most computers for later recall.

The most popular CB simulation programs are offered by Compuserve, based in Columbus, Ohio, and The Source, owned by Readers' Digest. The CB simulator is among the most popular services offered, according to the utilities.

Each service maintains several dozen "channels" to which users can tune. The channels have specialized designations for adults, children, programmers, and others.



You might think from our name that all we carry is business and personal software.

This Holiday Season, come down to our store and take a hard look. We've got accessories, modems, disk notchers, memory boards, printers, and hard disks. Along with the biggest selection of computer books and magazines in town.

That's not all. You'll find supplies like diskettes and paper and computer furnishings. And some of the friendliest, most experienced people in the business. So visit us at the Softwaire Centre — your computer general store.

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NOW LET'S DISH UP SOMETHING FOR THE COOK . . . by Karen Alessandro

Maybe I'm just humoring myself, but I always think I'm an average woman, Ms. Normal, your usual blend of sex kitten, den mother, household drudge and brilliant career woman. If I'm right (about being normal), there are a lot of kitchen notebooks out there like mine. My kitchen notebook is a big, yellow 3-ring binder, about twenty years old. It became my kitchen notebook when it was too old and ragged to be my school notebook. In it I keep special recipes from family and friends, the usual assortment from newspapers and magazines, and a bunch from the year I subscribed to *Cuisine.*

My cooking is famous in a modest, local sort of way. I always figured that in case of disaster, I could always get by on my chocolate chip cookies. The book is more than a cookbook to me; it's more like a secret stash of gold under the mattress. For a time I treated this book with the respect it deserved. Recipes were sorted, clipped and pasted in their proper places. The fish dishes were on the fish page and the pies went under desserts. But lately (for the past ten years) I just stuff everything in wherever it will fit. The potential for disaster was enormous. Beyond the usual wear and tear of torn pages and grease spots, there was the horrible possibility that I might lose a crucial recipe! That chilling thought lurked in the back of my mind like unpaid taxes.

Then I was given a cookbook program for our home computer. My program was MicroCookbook by Virtual Combinatics,* but there are probably others. I'm not exactly computer friendly, but this program was so easy I didn't even need the instruction book. Gradually I transferred all my treasured recipes onto diskettes. They are automatically organized into category. Best of all, there is an ingredient function. If I discover an aging eggplant in the back of the refrigerator I can pull up all my eggplant recipes for review. If I have a recipe that serves eight and I only need to serve two, the computer will do all the math and print out a shopping list to boot.

Of course, nothing can replace my yellow notebook, but now I have a fail-safe system to keep the fish from slipping into the desserts.

**Micro Cookbook, Published by Virtual Combinatics. Available for Apple, IBM.*

SONGWRITER

by Pat Hamilton

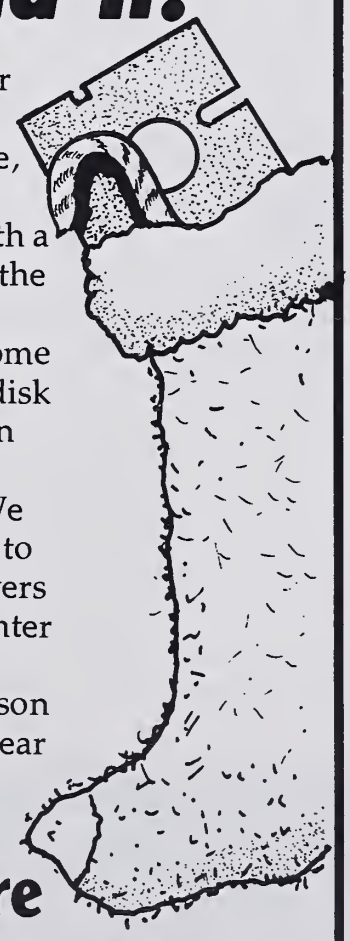
All right, all you budding musicians out there, *Songwriter* was created with you in mind. This program does not even require the ability to read music and was designed for the user who can't tell a sharp from a flat. Users can reference the command card, quick start instructions, and begin writing music within minutes.

Songwriter compares its program to a player piano which reads the holes in a roll of paper and plays keys on the keyboard. *Songwriter* uses the spacebar to visually punch a hole in the paper and roll it onto the screen in the shape of a dark box ready for the next note. The command structure remains on the screen at all times to facilitate learning. The program includes a printed command summary card as a quick reference for playing and editing and option commands for further ease of use. It has a built-in Diatonic scale but it is possible to use other scales such as Pentatonic.

The program includes a library of 28 songs ranging from "Mary Had a Little Lamb" to classical minuets. Since the program comes with many songs already on the disk, beginners might try watching a section of a song they like and then attempt to write a song that looks similar. Songs and ideas can be stored on disk for future use or editing. The capabilities of your own personal computer are your only limitations. An added feature of this program is the stereo connector and cable which allows you to use *Songwriter* with personal headphones, just in case your first attempt doesn't quite make it

Game Design by Art Bardige and Samuel Wantman, published by Scarborough Systems, Inc. Available for: Apple II + (with 48K), Apple IIe, Apple II (48K) with language card, Apple III (emulation mode), Atari (48K), Commodore 64, IBM-PC and PCjr.

Ho-Ho-Hold It!



Before you wrap up your Christmas shopping list, consider computer software, and some of the other accessories that go along with a computing system used in the home or office. Flight Simulator would be a welcome addition to any executive disk drive, and Math Blaster can help your kid — without hurting his or her teeth. We have a furry mouse house to dress up your Mac and covers to keep your PC snug all winter long.

Light up this Holiday Season with the gift that works all year round.

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THE SUNNYVALE

SOFTWARE DIGEST

Inside:

Roger Rapoport on Broderbund
Ira Kamin on Word Processing
PLUS — Toning up at the Terminal, Tax Writeoffs, Communicating À la Modem, and Money Saving Coupons in the Centerfold.

Software Digest of Sunnyvale
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DataLife Holiday Pack
FREE
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$9.60 value + Plastic storage box
With purchase of 10 Verbatim Minidisks

$10
Instant Cash Register Rebate

(With this coupon and minimum $49.95 purchase of non-sale items. Limit one to a customer.)

See Centerfold for More Special Sales

PAPERBACK SOFTWARE INTERNATIONAL

Adam Osborne is back with another new idea.

By Ken Goehner

Ron Ogg and Adam Osborne. Photo Richard McCaffrey

The building is a modest one story structure on Eighth Street in the industrial section of Berkeley, sparsely furnished and heaped with boxes being readied for shipment. The air is thick with the smell of coffee and the whine of cooling fans from a myriad of different IBM-compatible microcomputers; the atmosphere is relaxed, intent, purposeful.

The relative calm is suddenly shattered as a loud strident voice starts bellowing from a corner office with a ferocious authority that could stop an elephant stampede.

It is Adam Osborne, doing business.

He is a tall, dark, strikingly handsome man of the sort that Ayn Rand rhapsodized about in her novels. His very presence commands attention and respect, his forceful gaze reveals a powerful intellect that seems to be working on a number of levels at once. He is not the sort of person to be taken lightly under any circumstances, least of all as a competitor.

He founded Paperback Software shortly after the demise of the Osborne Computer Corporation. This new company was designed to be a software publisher and distributor as opposed to a development firm, with a new approach to mass marketing. "The software we have got is excellent software," Osborne says. "We are not, at the present time anyway, planning to take the software industry by storm based on the nature of the software. We have a product that will take the industry by storm next year, but not this year .... What we are doing is mass merchandising the product by reducing the price to the point where people will buy in volume. I don't believe that people realize how price sensitive the market really is — and most packages will fall off a cliff in general sales when the price approaches a hundred dollars or above. We are packaging our product to be mass merchandised through bookshops. It is something that a lot of people have done before, but what makes our approach unique is that we make sure that we have an open book format for the diskette that is theft protected and is very difficult to steal out of the book. The pricing is unique — it's very low for the quality of the software that we're selling."

The phone on Osborne's desk begins to ring with alarming frequency. "What you could do that would be a little different would be to point out that there are other people in the company besides me." The phone rings again. "Ron Ogg is the number two person in the company. He can probably tell you as much if not more about what we're doing as well I could, if not better."

Ron Ogg is a tall, affable man who had been in charge of software products at Osborne Computer. He smiles as he launches into the philosophy underlying Paperback Software. "We decided to go into publishing and distribution for two reasons. What we found is that most of the really good software that's out there was written by either an individual person or a very small team and that those products are significantly better than those developed in a large product team environment. So we wanted to take advantage of those individual product developers that are out there who don't have a major distribution umbrella already. Secondly, there are a lot of companies out there that have products on the market, but are really development oriented companies. They would really like to get out of the marketing and production side of things and be able to spend their time developing new products, and we wanted to take advantage of that, managing their existing sales and marketing."

"Another major tenet of our philosophy is that, well, if you owned an IBM PC or a compatible and went into a fairly typical dealership and told them that you were considering buying a Lotus 1-2-3 or Multiplan or any other of a number of other high ticket software packages, about the best you can expect is, if you're lucky, that you'll be given a demo package of each, be pointed to a computer and a chair and told to play with them yourself. In some cases you may even get a sales pitch, where they only have one package and try to push it by knocking the other one, or the guy tries to talk you into buying his favorite. But you don't get the kind of sales discussion that the software companies like to think should be supplied. When you stop to think about it, the main incentive in these places is commission and the commission on a software package is just not enough for a salesperson to spend an hour or two with a person, particularly

when the person is not likely to make a several-hundred-dollar decision on the spot. So we wanted to take the reality of the situation and turn it to our advantage. First, by taking a lot of the capabilities you have in the higher priced software levels and putting them at a lower cost so that it's no longer such an investment-level decision, and second by letting the product itself do the selling job. By that, we meant to get away from the conventional method of displaying software in sealed packages with a demo perhaps hidden away somewhere, and have a product that somebody could take off the shelf and leaf through, and in that way determine whether or not the product had the capabilities, features and benefits that they're looking for. This ties in with our feeling that a lot of our sales will be coming through bookstores such as B. Dalton, Waldenbooks and other retail outlets in addition to the computer chains and retailers."

Paperback Software started shipping its products for the IBM PC and compatibles in mid-October (Apple IIc & IIe software available in 1985), and expects to have five of its packages in stores around the country before Christmas. They are:

Executive Writer, an advanced level word processor with the abilities to create an index and a table of contents as well as headers, footers, and other sophisticated functions. It is very fast and easy to use, a what-you-see-is-what-you-get type program which also allows you to include bitmap graphics files by name in the document so that when the document prints, the graphic is included in the hardcopy. Document size is limited only by the amount of space available on disk. List price: $69.95.

Paperback Writer, a streamlined version of *Executive Writer*, for people who don't need to insert floating footnotes or graphics into their copy. List price: $39.95.

Draw-It, a general color etch-a-sketch and general purpose graphics program that allows you to insert numbers and labels onto pie-charts, bar charts, and line graphs, do freehand illustration, display your graphics like a slide show, or print them out through DOS or with *Executive Writer*. List price: $29.95.

Number Works, an entry level spreadsheet, roughly equivalent to the early Visicalc. Easy to use, with on-line help. Size limited only by the amount of space available on disk. List price: $39.95.

My ABC's, six educational games for preschool children, teaching letter recognition, counting, and other fundamental skills. List price: $19.95.

Scheduled for release early in 1985 is a package called *Executive Filer*, an "index card" data base for keeping track of home and business inventory, which can integrate with *Executive Writer* to provide an additional onboard reference system for writing lengthy documents and "capturing" long, oft-repeated phrases. List price: $49.95.

All these packages have a standardized human interface and internally consistent documentation, so that once you learn one package, you can transfer your understanding of command sequences and function keys to all other Paperback products.

Paperback is developing in other areas as well. As of November first, *Adam Osborne's Bay Area Personal Computer Buyer's Guide* will offer up-to-date advice and information on what kind of computer is best suited to your needs, and where the best prices and technical support can be found in the Bay Area (if this venture proves successful they will expand their geographical scope.) The price is extremely reasonable — $7.50 for the first five minutes, $2.00 for each additional minute, and the advice is guaranteed to be impartial and accurate. The number to call is (415) 644-8420.

All in all, it looks like Adam Osborne is back to setting trends again, which is all for the better if other companies follow his lead and adopt the Paperback Software International credo of "Making Quality Software Affordable." □

For further information contact:
Paperback Software International
2612 Eighth Street
Berkeley, CA 94710

Adam Osborne

Adam Osborne is not famous for keeping his opinions to himself or for kowtowing to conventional wisdom. His outspoken views and controversial analysis of the computer industry have won him a reputation as a maverick ahead of his time.

In the early 1970's he was among the first to write and publish technical books for the fledgling microcomputer industry. By 1979 Osborne and Associates had become the leading publisher of microcomputer books with some twenty-five titles on the market and had attracted the attention of several major publishers. In May, McGraw-Hill tendered an offer with the proviso that Osborne & Assocs. stay on to manage the division for three years until a full takeover could be effected.

Osborne learned a lot about finance and management under the auspices of McGraw-Hill. By early 1980 he began casting about for a new venture to replace his publishing business. His assessment of the market led him to the idea of creating an inexpensive "no frills" portable computer equipped with a "bundled" package of popular software. To this end he worked full-time days at Osborne/McGraw-Hill, and nights and weekends with hardware wizard Lee Felsenstein, laying the groundwork for what was to become the Osborne Computer Corporation.

In less than a year, the Osborne I computer was on the market. It was the size of a small suitcase, totally self-contained (sans printer) with two onboard disk drives, a five inch monitor, keyboard, and space for storing the supplied word processor, spreadsheet, and language disks. Skillful marketing and reliable technical support made tremendous inroads into the national market and helped establish a loyal customer base. By 1982 the Osborne I was being sold throughout Europe, and despite some growing pains, it looked like Osborne was well on its way to becoming a household word.

The beginning of 1983 seemed very promising indeed. Two new products were being readied for market; journalists were siting Osborne as tied for first place with Apple and IBM in the business micro arena, and the Osborne distribution system was expanding rapidly into the home retail sector. But somehow, by mid '83 the company found itself in desperate straits and, in September, filed for bankruptcy.

There is no clear explanation of what happened to the Osborne Computer Company; the story is largely clouded by the perspective of the participants and their relation to the entity as a whole. The most insightful and intriguing account publicly available is contained in the book *Hypergrowth* by Adam Osborne and John Dvorak (Idthekkethan Publishing, Berkeley. ISBN 0-918347-009. $19.95, hardback), in which Osborne puts forth his view of what happened to his company and where he thinks the industry is going as a whole. This is a fast-paced work that lies somewhere between an adventure novel and a case study on managerial technique. It should be required reading for anybody interested in becoming a high-tech entrepreneur, or even remotely interested in what makes the industry tick.

— Ken Goehner

3M Diskettes
$1.85 each SS/DD

5-1/4" SS/DD Soft	10 Disks Box	$18.50
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3M Head Cleaning Diskettes

8" 7400	$18.25 each
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Argonaut Diskettes
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100% Certified Reinforced Hubs — Meets or Exceeds all Ansi Standards
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Packaged 20 per pack with write protect tabs (envelopes extra)

Generic Diskettes
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Packaged 20 per pack with write protect tabs (envelopes extra)

Ribbons

Apple Dot Matrix (same as NEC 8023)	$4.29	Epson MX 100 Ribbon Cartridge	4.99
Apple Letter Quality Printer (same as Qume/IBM 6240 MS Film)	1.95	NEC 5500/7700 Spinwriter MS Film 1/4"	3.30
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COMDEX REPORT

By Jeff Spurrier

"A lot of people in the microcomputer industry refer to their recent experiences as the 'summer slump of 1984.' Not only did manufacturers feel it, but also retailers and distributors. Prices were down, market growth slowed, and quite frankly the future of the microcomputer industry was being questioned. All companies felt the pinch. Many lost huge sums of money."

— Spokesman for Maxell at a COMDEX press conference

LAS VEGAS — The mood in the microcomputer world lately has been far from upbeat. Established names have vanished from view, the bullish computer publication field has turned into a snarling bear, and the euphoric dream of an on-line America has been replaced by a nightmare of bankruptcies, Chapter 11's, and Chapter 13's.

All in all, it would seem not the best time to hold a computer convention. But some things can't be put off — especially COMDEX, the microcomputer industry's annual powwow and promotional blitzkrieg extravaganza.

The sixth Fall COMDEX rolled into Las Vegas November 14 for a five-day stay at the Las Vegas Convention Center and four area hotels. By Sunday afternoon nearly 100,000 visitors — primarily dealers — had trudged wearily past the 7,500 booths sponsored by some 1,400-plus manufacturers and service organizations. Despite the industry's doldrums, this year's COMDEX was the biggest ever: 24% larger than last year.

Unlike past shows, there was no single earth-shaking product or unifying technological trend to point the way towards an ever-expanding (and profitable) future. And considering how often in the past over-hyped products have failed to materialize anywhere except at COMDEX, perhaps this year's sense of caution was a positive indicator of the industry's maturity.

"It seems to be almost a down year in technology," said John Di Pietro, an employee of Apricot Computers. "There are no quantum leaps like before. The presence that was always felt in the show by all the micros is just not here. Maybe people are just jaded. Once software was the darling, as was micros before it. Now it's hard to tell who's the darling."

While there were no "obvious darlings," certain product trends and attitudes were fairly evident, even by the second day. "I see a more selective buyer asking more intelligent questions," said Frank Barbosa of Sharp Computers. "I think the distribution channels of the industry are changing and I see more emphasis on the retailer. In terms of products, portability seems to be the next wave along with more compact desktops."

Despite the fact that a number of portable computer companies have perished in the last year — over 150 according to one press report — portables still seemed to be where most of the action was taking place. Consider a few of the latest lap-size entries:

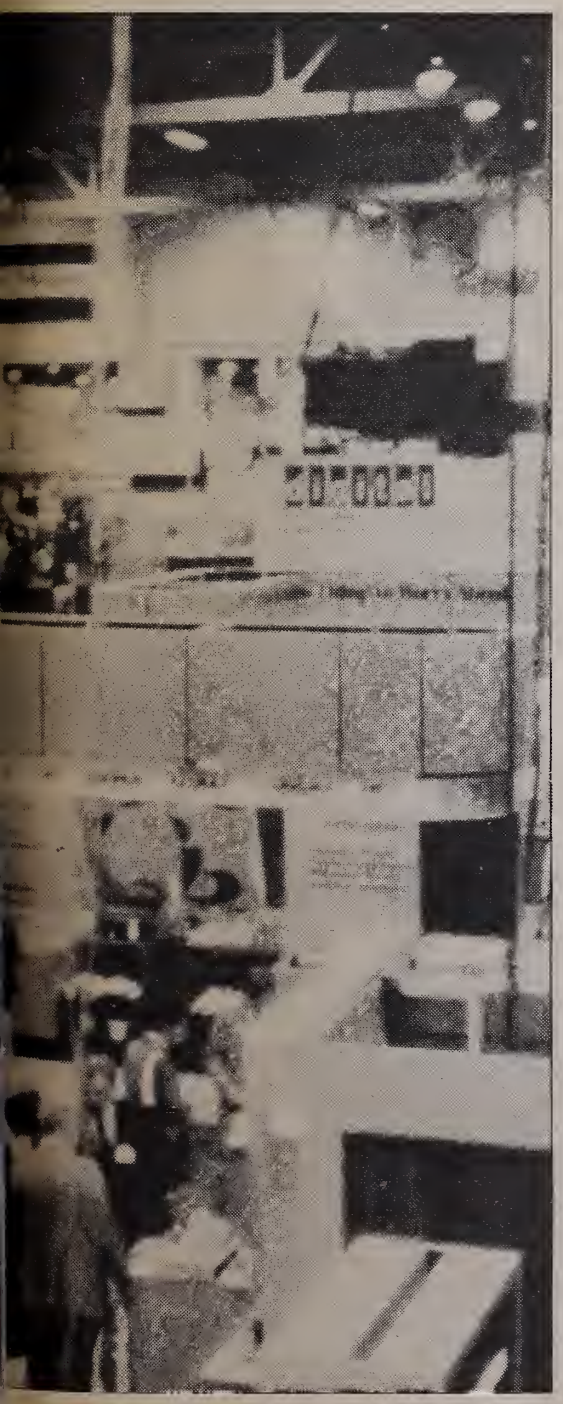
The **NEC PC-8401A** (16x80 LCD, built-in 300 baud modem, 64K RAM and 96K ROM, CP/M, software on a chip, 4.5 pounds, battery-powered, $999); the **Datavue 25** (25x80 LCD, 16-bit microprocessor, 128K RAM, built-in 5.25 inch floppy drive capable of holding 360K, IBM software compatible, 14 pounds, "under $2,000"); **The International Quartz Personal Business Computer Model #9242** (25x80 LCD, 16-bit Intel 80186 microprocessor, MS-DOS, CP/M, 360K RAM, dual 5.25 inch floppy drives, IBM software compatible, 14 pounds, retailing — maybe — for less than $1800, depending on the deal this Hong Kong-based company can strike with distributors and retailers); the **Sord IS-11C** (25x80 LCD, 80K RAM, 72K ROM, built-in micro-cassette, bundled software, $1499); the **Texas Instruments Pro-Lite** (25x80 LCD, built-in 300 baud modem, 16-bit micro-processor, 256K RAM, 3.5 inch floppy drive, IBM-PC compatible, 10.5 pounds, $2,995).

And while many companies agree that there is a strong potential in lap computers, there is still little agreement on the best format for data storage. "Our (lap computer) is a 5.25 unit," said Rod Johnson, the President of International

The convention floor at COMDEX. Photo: Jeff Spurrier

Quartz. "You take a disc out of an IBM and put it in here and it runs it. A lot of other portables have 3.5 inch disk drives but if I gave you $10,000 to buy all the 3.5 inch software you could find, you'd come back with $10,000. You can't find it."

Other items of interest at COMDEX: The **Omni-Reader** from Oberon International. This is the industry's first inexpensive optical character recognition machine. This scanner allows a user the luxury of having printed text fed directly into a computer's memory without the necessity of re-keying. Unlike past OCRs which have cost anywhere from $6,000 to $30,000, The Omni-Reader is planned to retail for $499... **Wordstar 2000**, an updated and expanded version of the world's best-known word processing program. According to Micropro, *Wordstar 2000* can be learned "in minutes" and among its many new features includes an un-do command ...The **Hayes Smartmodem 2400** which suddenly makes 1200 bps seem slow... The **metal floppy disc** from Maxell. This item, for which there is no system yet, is a 5.25 inch floppy with a ten megabyte storage capacity. More than anything else announced at COMDEX, the metal floppy — which is not yet available — could have the greatest impact on the computer industry as a whole.



"COMDEX is just too big," remarked a Hewlett-Packard executive waiting for the hotel shuttle bus. "It's impossible to see it all, even in five days."

He had a point. The COMDEX show is so successful that people sign up a year in advance, resulting in some embarrassing situations. Some companies who had suffered severe economic shocks over the year wound up putting in token appearances with little new to show simply because their booths had been paid for months in advance. And the situation is likely to be the same for next year. According to one COMDEX press worker, the space for next year's show is already booked. Considering the stakes at hand one can see why. Said a young woman hosting a British trade organization booth: "one of our companies just told me that they had signed a $1 million deal on the first day here!"

While there were huge deals being made on the convention floor, in the casinos the action was substantially less. Grumbles were heard throughout the city that the COMDEX conventioneers gambled little, went to bed early, and preferred free shuttle buses over taxis.

If the nightlife of COMDEX was nothing to rave about, possibly it was because of all the activity in the Convention Center. Could Wayne Newton really compare to a giant frog perched on top of a huge CRT mock-up? The sensory overload of the convention floor mades weaving your way through a floor of jangling slot machines a breeze in comparison. There was so much going on: dancing laser patterns flickering over raised scrims, the incessant whirr of printers mingling with an endless hubbub of deals being made, banks of video commercials, graphics presentations, sales people explaining the intricacies of programs over PAs. The booth displays ranged from high tech to high touch, from *Battlestar Galactica* to *Raiders of the Lost Ark*.

It was all COMDEX: a combination of Alice in Wonderland and a carnival midway. A confusion of computers, a babble of bytes. And next year I'll be back.

COMDEX scenes. Photos: Jeff Spurrier

REVIEWS

BUSINESS SOFTWARE

Word Processing Primer Part III

by Kim Nelson

With the present trend in the industry toward ease and simplicity of use, there is a growing number of integrated software programs. Having the ability to merge programs is decidedly more productive. But what are the advantages and disadvantages of the word processing aspects of these programs?

APPLEWORKS is Apple's entry in integrated software for the II series of computers. This program brings the benefits of integrated software to the home computer user. Actually, the WP part would stand alone quite well. Those of you who have seen *PFS Write* or *Applewriter II* will find this program somewhat familiar. The software works under Apple's eighty column mode and gives it almost a full screen text display. It utilizes just two lines at top and three lines at bottom for indicators to make this program as user-friendly as it is. There is also a complete menu of commands available with just two keystrokes. This feature and its integration aspects combine to make it an excellent package for the home user. Although it does work in some ways with "Sensible Speller," it does have its own spell checking program on the way from Apple. Its one flaw seems to be that the program was designed to work with Apple printers only. Apple has since come up with a fix disk which gives it Epson compatibility and should be available from any Apple dealer. People with Orange Micro's "Grappler" interface may still want to stay away from this program since there are still compatibility problems even with the fix disk.

FRAMEWORK from Ashton-Tate is definitely for the business minded. The total program is very memory intensive, requiring 384KB of RAM to run. Personally, I recommend at least 512KB in order to get full usage out of it. The word processor is powerful yet easy to use. The program is menu driven and uses the same basic command structure for the spreadsheet, data base and word processor. With different commands, you can either get a full screen text display or a text window with command functions listed. All the business word processing standards are here: automatic page numbering, justification, different formats within files and four function math capability. It will give you an actual printout screen display or show all the control characters if you desire. Its text search and replace routine is my personal favorite, with its ease of use and ability to use simple wildcards. You may also toggle between deletion and insertion modes. Single keystroke commands give you the ultimate in productivity. Of all the programs we tested, it seemed that our staff had the most fun with this one. Its one big problem seems to be its aforementioned memory intensiveness, but I would still recommend that anyone looking for a business system take a careful peek at this one.

SYMPHONY by Lotus Corp. is another memory hungry program. This one requires 320KB to run; however, *Symphony*'s spreadsheet is very memory intensive and, as a result, I recommend that a person have 640KB of RAM to use it efficiently. This word processor uses a kind of formatted spreadsheet to do its word processing. There are two "windows" displayed on the screen. The "DOC" window displays all the indicators, such as current margins, tab sets, spacing, etc. All written text is displayed in the "SHEET" window. Again, this has all the necessary accoutrements of a business system, but using the spreadsheet format does seem to be somewhat slower than other techniques. This seems to be caused mainly by the fact that you must return to the "DOC" window to do certain format changes. The program does integrate well which is the positive result of having the different parts all use the same format. It has search and replace features, and operates in both insert and delete modes. One nice feature is the ability to place markers in various locations in the text. You may then return to these markers with a single keystroke. Another plus is *Symphony*'s ability to use any number of formats within the same document, and don't forget its four function math capabilities. This program is a bit harder to learn than the others, but the command structure is cohesive and the manual is well written, though massive. Lotus users should have no trouble converting.

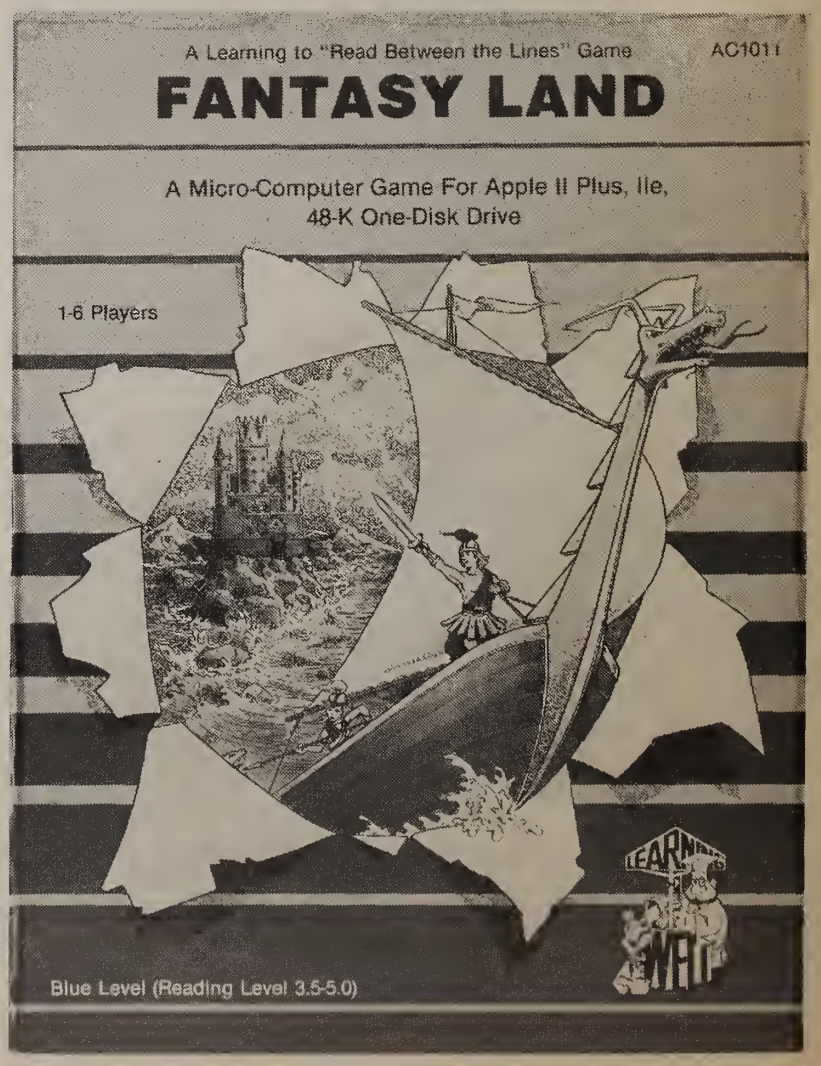
EDUCATIONAL SOFTWARE

FANTASY LAND

Reading Between the Lines
Blue level
Published by Learning Well
For Apple II+/IIe

Fantasy Land is an educational program using an adventure game format. It features reading comprehension practice and higher level thinking skills in the area of reading. The program involves the ability of the student to read a short story and then answer a question about it. Questions include different levels of thinking skills, from basic recall to determining implied meaning.

Fantasy Land may be played by one to six players. The game consists of a number of islands to which a player may guide his ship to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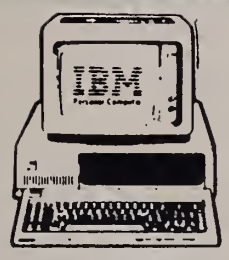

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land. Some islands are inhabited by a wizard. If the player lands on an island with a wizard, a story and question will appear. If the player answers the question correctly, he receives a magic coin. If there is no wizard on the island, there is no story or question and the turn goes to the next player. If a player lands on an island with another player, that player may challenge the new arrival. A challenge means that the player must answer a question correctly in order to take a magic coin from the first player. Answering incorrectly gives a coin to the challenged player. There are a limited number of coins which must be competed for by the players.

The ultimate goal is "Sword Island," which is not so designated, but reveals itself when landed upon by a player. In order to retrieve the "Sword of Justice" and win the game, the player must have at least three magic coins to receive the story and question, and must answer the question correctly.

The game features colorful hi-res graphics and sound effects which add to the appeal of the game, such as a musical rendition of "Blow the Man Down" when the wizard appears. The sound, however, may be deleted at the beginning of the game by pressing control-O.

The *Fantasy Land* program allows a roster of players to be established and a cumulative score to be recorded for each player in successive games. Scores of the players on the roster may be printed out if the computer has an attached printer.

Game parameters may be changed to accommodate individual student needs. Wait time, concerning how long a game play message will stay on the screen, may be changed. The speed of the student's ship may be changed, as well as the number of moves each player can use to get from one island to another. Also, the probability of finding a wizard on an island (and thus the number of stories and questions) can be increased or decreased.

This program would be an attractive addition to a school reading program, through use as an enrichment activity in a reading center, or as an incentive to students who need either an extra boost to enjoy and participate in reading, or to the student who is ready for enrichment in his reading program.

Fantasy Land is geared to the reader at about the mid-third grade level and up. It is a program that can be easily used by students with little introduction or monitoring by the teacher or parent. The story and questions are interesting and thought provoking.

Fantasy Land is good as an accompaniment to a basic reading program, but is inherently limited by the number of stories contained on the disk. As games progress, the number of repetitions of stories begins to limit the continuing interest of the players. This would not be as much of a problem for classroom usage where there are a number of players to use the program, but in the home the program usage would be limited.

— Dave and Rose Johnson

DELTA DRAWING

Published by: Spinnaker Software Corp.
For: Apple II+/IIe, Atari, IBM PC, Commodore 64
$49.95

Delta Drawing is an interesting, enjoyable and elementary approach to using the computer to create graphics and introducing the beginning user to computer programming, while having enough depth to hold the interest of the more advanced user.

The program is simple enough that children in primary grades can begin drawing simple designs with little assistance. The program begins with a delta (similar to a pointer or triangle) centered on the

screen. By using the commands "D" for Draw, "R" to turn the delta right and "L" to turn the delta left, the beginner can draw designs, pictures and geometric shapes. When the user wishes to move the delta without drawing on the screen, he/she uses "M" for move. When the user makes a mistake, the "E" command erases the last command and returns the delta to the previous position. At any time, the screen can be cleared by typing in a control-E to erase the screen.

As a design is created on the graphics screen a list of the commands used in the drawing can be displayed on the text screen. The user can write and edit this command list or program that draws pictures. Writing programs on the text screen and then viewing the results on the graphics screen introduces computer programming and problem solving.

Circles can be drawn by alternating "D" (draw) and "R" (right) until a circle is formed. Programs can be developed to allow repetitive designs such as this to be easily drawn. Like Logo or Pascal turtle graphics, these simple commands can be combined into procedures or programs which allow intricate designs by the more advanced user. For example, after a circle has been drawn, the user can push a number key, and Delta Drawing will memorize the previously typed-in sequence of commands defined by that program number. At any time that the user wishes to draw a circle, he/she can type the number key and the delta will draw the circle. Thus the user can define a "1" as a circle, a "2" as a small square, a "3" as a large square, and a "4" as a triangle to easily make more intricate drawings. One program can call another program. Variables and recursion are not supported. Shapes can be filled-in with different colors on a color monitor or in different textures on a monochrome monitor. Drawings can be saved to disk or printed using an appropriate graphics-capable dot-matrix printer and interface. Disk and printer commands can be easily understood by the beginning user.

Delta Drawing is a good graphics design program, and will also introduce the beginning user to computer usage, programming concepts, procedural thinking, problem analysis and disk and printer usage. As a stocking stuffer, for school age children through adults, this program should draw smiles and hours of enjoyment.

— Dave and Rose Johnson

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REVIEWS

EDUCATIONAL SOFTWARE

STORYLINE: SOFTWARE MOVIES

Published by: Maximus Inc.
For: Atari (Requires 48K, disk drive and program recorder)

This educational software package is unique in combining color graphics, music, voice (not synthesized), and some animation simultaneously. When trying to capture and retain the attention of a three-year-old, you need all the help you can get. *Storyline* is a wonderful innovation in the field of computer learning software and my kids have enjoyed it immensely

Software Movies features "Clover the Clown" as narrator. The screen is animated and has background music via the cassette program recorder. The disk drive is also qued from the recorder as the story progresses on the disk/cassette version. There are two stories and four games, two at the end of each story. The first story is "Rumpelstiltskin" and the games are "Promises, Promises" and "Guess My Name." The games are similar to "Guess the Number" and "Hangman"; however, they use the Rumpelstiltskin character and reinforce the moral of the original story. In the second story, "The Ugly Duckling," the games are "Pick the Twins," a matching exercise, and "The Duck Puzzle." Each of these may be played with a joystick or by use of the keyboard arrow keys.

Storyline is a simple software program to boot and run: prompts walk you through the set-up and into the games after the story is finished. The only trouble I encountered was with the use of the cassette a few times during the story. However, I can't blame *Storyline* for this, because we all know the historical problems associated with Atari recorders.

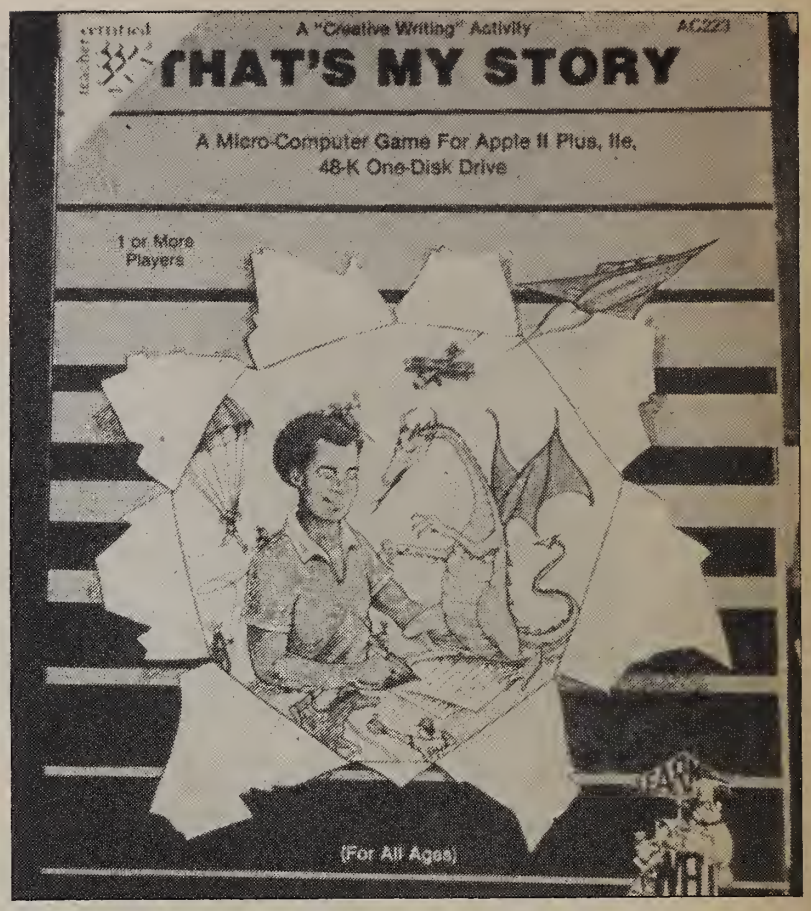
I was able to test this product with children aged two years to nine years; all of the kids watched with enthusiasm and enjoyed the stories and the games at the end. The learning level of this product varies with the age of the audience, but does offer skills ranging from reading, spelling, and memory retention to problem solving and hand-to-eye coordination. The concept of *Storyline* is very good, and the educational value rates high. In a world of predominantly "shoot-'em-up" type game software, a quality educational package such as this deserves a spot in your home library.

— Doug Pencille

THAT'S MY STORY

For: Apple II Plus, IIe, 48K One Disk Drive
Designed by: Methods & Solutions, Inc.
Published by: Learning Well

All of the educational software I have looked at recently does fulfill the prerequisite of "educating" in one form or another: i.e. teaching the child to spell, add, subtract, even speak foreign languages; but many of them lack the play and interest factors which are crucial to maintaining a child's short attention span. On the other hand, some



programs are just a little "too cute" and this eventually detracts from the actual learning process.

That's My Story by Learning Well is a unique program, providing a structure that motivates the creative writing process. (You should note that the child, or adult, for that matter, as the program is designed for all ages, will not be entertained by graphic figures, mazes, or strange beeping noises emanating from the computer. This fact alone could be mildly threatening until you adjust!).

The first few paragraphs of a story or set of ideas, called story starters, may be loaded onto the screen to help break the ice. Most of the story starters provide a mild dilemma which you, the would-be author, can solve. A list will appear on the screen showing available story starters. The number next to the title of the story starter indicates the suggested grade level involvement. One such scenario (grade level 2) illustrates "Ralph, the dragon who was so small that the other dragons ignored him," and offers a few paragraphs regarding his plight in a world of giant dragons. At this point you can choose a "what if" scenario which offers possible options or outcomes to the given story in question format — e.g. "One day Ralph could stand it no longer and decided to..." Otherwise, you can surge on ahead to complete the story unassisted. If you choose a "what if" option that has not been written, the computer will ask, "Would you like to write it?" By answering, "Yes," you can proceed to input your ideas in paragraph format.

For general use, *That's My Story* contains an open roster called the "Anybody" roster. This allows anyone to use the program and will appear until the instructor or parent creates and loads another roster. The story can involve multiple authors and you might even consider adding a ghost writer. You can also use *That's My Story* for foreign language writing practice, social sciences, reading exercises or to illustrate how changing conditions affect science experiments.

I'll admit my partiality to educational packages, but I am impressed by the lack of visual entertainment in this program. There are no "pictures" of Ralph on your screen so the author must describe his appearance and his feelings to the reader. And isn't that what writing is all about? After all, aren't the movies usually a let-down if you have already read the book and mentally created your own heroes and heroines?

— Pat Hamilton

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REVIEWS

GAME SOFTWARE

MR. DO!'S CASTLE

Published by: Parker Brothers
For: Atari 5200, Atari 2600, Coleco; on disk for Atari Home Computers and Commodore 64

Mr. Do!'s Castle, which seems to have made a big hit in the marketplace lately, is, surprisingly, a fairly simple game. It is a one player game that can be enjoyed by various age groups: simple enough for the younger audience, yet still appealing to teens and adults.

The object of this game is for the clown (which is you, Mr. Do!) to knock out as many cherry blocks in the hallways as possible. He is armed with a hammer which is activated by the "fire" button on the joystick. At the start of each game, you receive 5 Mr. Do!'s. You begin at level one and proceed to a new level each time all of the monsters are killed. The monsters come in three colors; pink, green, and blue. The green monsters are faster than the pink, and the blue monsters are faster and trickier than the green.

There are 8 different scenes and 16 levels of difficulty within the castle. The higher the levels go, the harder the game becomes. It is not particularly difficult, but requires good strategy and skill. Remember that causing monsters to fall multiple floors increases your score. Be sure to pick up all the keys along the way so you can open the door at the top of the castle.

— Holly Alix

GUMBALL

Designed by: Robert Cook
Published by: Broderbund Software
For: Atari. Requires 48K, color monitor, joystick or keyboard controlled

Try your hand, or joystick, at the Sticky Sole Gumball Factory and see if you can keep up with the demanding pace of Mr. Nitpicker. As your supervisor, he is constantly checking your work and has a nasty way of having you start over should you make any mistakes. Since your points are based on piecework, this guy can be disastrous to your total score.

Just what is happening? Well, as the gumballs are coming off the assembly line you are responsible for their entry into the proper bin by moving the hoppers, switching the gates and tripping the ball traps. One gumball in the wrong bin and Mr. Nitpicker comes out snarling and swinging his fist and dumps out all of your gumballs. Not only are you rewarded on a piece-work basis, but you also must make your quota for the day or you're fired! There is one ray of hope though: if you surpass your quota, you are rewarded with bonus points. To add to the difficulty, you are on a time clock, complete with a 5 o'clock whistle.

In order to keep up the game intensity, Robert Cook has added situations that involve quality control and occupational hazards. You must be on the watch for rotten gumballs and "gumball bombs" which have been filtered into the system — probably by a deranged dental professional!

Broderbund has another terrific gaming winner with *Gumball*. The game has five successive levels, each of increasing difficulty. Graphics and screen action are good, and if you ever master the highest level you can try the game using only the keyboard controls. There are various command keys to toggle the sound off and on, change controls to and from the keyboard/joystick, review the high score screen and restart the game.

Gumball offers hours of fun in a challenging fashion. I do, however, suggest that a monitor or T.V. screen of 13 inches or greater with good color control be used. Otherwise you may not be able to recognize the "gumball bombs," and that can ruin your chances of attaining the higher levels of the game.

— Doug Pencille

Archon II: ADEPT

Designed by: Free Fall Associates
Published by: Electronic Arts
For: Atari

Free Fall Associates, in conjunction with Electronic Arts, has released an excellent sequel to the popular *Archon* computer game. The premise of the game is similar to the first one: the forces of chaos and order battling it out to control the world. In the first version, however, the various icons struggled on a chess-like board, while here the strife takes place on a playing field, a stylized representation of the world's elements.

The player has four major spellcasters, each of whom may summon demons and elementals of eight different types. Each summoning results in a loss of power for that side. A side's power level is controlled by the number of key squares which its pieces occupy at that given point in time. These squares are constantly changing positions through the four element areas of fire, air, earth and water.

Each of the various icons has certain strengths and weaknesses which become apparent on the individual battle board which the game shifts to whenever two opponents occupy the same position. The game continues until one side is destroyed, one side occupies all the power points, or one side is defeated as a result of an Apocalypse battle.

On the whole, the game plays well and the finishing touches which Electronic Arts puts into all their games, such as the musical scores, are always an added treat. Real Archon fanatics should go crazy for this new entry. Personally I didn't feel that the game was enough different from the first version to warrant spending the $35.00.

— Kim Nelson

BOOKS

FIRE IN THE VALLEY

By Paul Freiberger and Michael Swaine
Published by Osborne/McGraw-Hill

"There was a strong feeling that we were subversives," says Keith Britton, one of the members of the Homebrew Computer Club. "We were subverting the way the giant corporations had run things. We were upsetting the establishment, forcing our mores into the industry. I was amazed that we could continue to meet without people arriving with bayonets to arrest the lot of us."

Dangerous subversives? In Silicon Valley? Yes. And you can thank them for whatever hardware system or software you're now using.

That is the theme of *Fire in the Valley* by Paul Freiberger and Michael Swaine, a wonderfully detailed history that is aptly subtitled "The Making of the Personal Computer."

Fire in the Valley begins at the beginning with a brief glimpse at computer development over the last 150 years and a basic but necessary definition of the physical mechanics of how computers in general function. This background may be a bit slow going for some, but by page 21, the effort pays off as Frieberger and Swaine tell the story of a 13-year-old Seattle hacker named Bill Gates, a computer whiz who would grow up to become one of the founders of the software giant Microsoft.

The growth of the personal computer is the story of many individuals like Bill Gates, CP/M creator Gary Kildall, and Apple's Steve Wozniak. Along the way the reader meets scores of other innovators — some successful and some not. They are names guaranteed to send shivers of recognition up any true hobbyist's spine. And for those who are latter-day users, the colorful anecdotes and quotes which the writers have gathered help bring alive the sense of chaos, brilliance, and whiz-bang fascination that marked the origins of the microcomputer industry.

Fire traces the development and rise of all of the systems and machines that have been influential in the micro-computer world. One reads of the legendary Altair, one of the earliest kit computers, whose name was provided by a 12-year-old Trekkie:

"Ironically, Les Solomon's 12-year-old daughter Lauren came up with the name that stuck. As she was watching *Star Trek*, her father walked into the room and told her, 'I need a name for a computer. What's the name of the computer on the Enterprise?' Lauren thought a moment and said, 'Computer.' Her father obviously didn't think that that was much of a name, so Lauren suggested, 'Why don't you call it Altair? That's where the Enterprise is going tonight.' "

Like the Enterprise, the individuals whose stories are re-told in *Fire* are the sort that "bravely go where no man has gone before." Unfortunately it's not always a safe trip. And Freiberger and Swaine don't mind providing all the gruesome details of the failures of would-be kings along with the scores of luckier souls whose left-field ventures are now household names.

While the authors themselves are clearly participants — both have spent most of the last ten years reporting on computers — they manage to maintain a well balanced reportorial distance from their subjects.

Fire in the Valley is far more exciting than a book about computers is supposed to be. The book serves to remind us that the reality of the personal computer is a very new phenomenon, one that arose, as Homebrew founder Fred Moore says, "from people who are on the edge, who have an alternative vision."

— Jeff Spurrier

GAME SOFTWARE

FREE TRADER

Design by: John Bell
Program Development by: Winchell Chung
Published by: The Avalon Hill Game Company
For Apple (48K) and Atari (48K)

You have to understand that the first "game" most of us oldtimers ever played on a computer was some version of *Star Trek*. There were many different versions but they all worked about the same. There was a flat grid of section — this was your star map of the galaxy. You maneuvered your starship between sectors with your warp drive, then you got a display of the sector you entered, so you could move around on impulse power. When you ran into Klingon cruisers, you would fire by entering the angle or bearing of the target. In some sectors you could dock with a starbase to tank up on energy, repair damage and get new plugs, points and dilithium crystals.

As games go, it wasn't much. On the big mainframes they would never let you play it when anyone needed the terminal for something "serious." But you understand, we loved it. It was our first computer game — the first encounter with the power and the magic of the ultimate toy. And it sure taught you the art of estimating angles (...not a vital survival skill for most of us, but a handy knack if you forget your protractor...).

The old *Star Trek* games have been reborn in Avalon Hill's recent release of *Free Trader*, with a few new twists thrown in. Nothing in *Free Trader* infringes on any of Mr. Roddenberry's copyrights, or pirates from Mr. Lucas' movies, but the background, basic assumptions and future "technology" will be more than familiar to the veteran science fiction addict.

To win this game of intergalactic commerce, you must accumulate a certain total of megabucks, or destroy 100 enemy ships within one year (365 turns). The blend of warfare and commerce may seem a little bizarre, but there have been periods of human history when merchant ships were armed to the teeth.

The worst problem you'll encounter as a beginning player in *Free Trader* is running out of fuel for your ion drive engines (used within a system for slower-than-light travel). Buy all you can if you find any planet selling them. If you run out of fuel, the program prints a nasty message about pirates stealing your cargo and leaving your lifeless corpse drifting in space.

Free Trader is hardly the state of the art in microcomputer games. The graphics are crude, the programming (in BASIC) is not blindingly fast in execution and the game system lacks the sort of "chrome" that makes these little pastimes engage the imagination. If you want to create a good science fiction game, you have to create a credible, detailed future. The Atari version of *Free Trader* has some routine arcade-style action with the joystick, but the Apple version lacks excitement after a few playings (unless your idea of excitement is running out of fuel in the middle of nowhere).

— Mike Markowitz

CLASSIFIEDS

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YOUR COMPUTER NEED REPAIR?

Video not clear or no video? Disk drive does not load properly or is out of order? Contact the Commodore Home Computer Center, 22521 2nd St., Hayward, CA 94541. (415) 537-1323.

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for IBM and compatibles. Contact Franklin Telecom, 31320 Via Colinas # 114, West Lake Village, CA 91362. (818) 706-1186.

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4 users MPM system w/10 meg hard disk, like new $2300; new Osborne I DD grey $695; H-P 125 dual drive CP/M $1600; DMS-3 dual drive $650; New GE dot matrix serial 200 CPS orig. $2000, sac. $995. (415) 892-7056.

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COM 64 SOFTWARE FOR SALE:

Busicalc 2 spreadsheet full doc. — $35. Omniwriter/w/dict. full doc. — $28. Simons-Basic full doc. $28. Contact Ed: (408) 996-8574.

EQUIPMENT

RELEASE 2

Low tech furniture for the future. Call or write: Martin Cooper, c/o Dean Santner Design, P.O. Box 88185, Emeryville, CA 94662. (415) 653-9300.

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Colorful and useful command posters!! For Wordstar, Unix shell commands, The Editor VI, 4.2 BSD. Send $5 each, check or money order, to Typographics, 492-63rd St. Apt. A, Oakland, CA 94609.

USER GROUP LISTINGS

MicroTimes offers a free listing service for user groups.
See page 36 for more information.

Have you outgrown your old computer? Is that video game not as much fun as it used to be? Looking for a good deal on used equipment?

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FREE USER GROUP LISTINGS

MicroTimes is a new, free computer magazine with a current monthly distribution of 100,000 copies in Northern and Southern California. In addition to interviews, features and reviews, we offer a free listing service to user groups, bulletin boards and computer associations. Let us hear from you. Use this coupon for your listing, and feel free to include any additional information for our newsreels column. Our next issue will be January, so please send us your info by the third week in December.

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Keep up with California computer news. If you're having trouble finding MicroTimes in your area, get your own personal copy delivered by mail.
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USER GROUP NOTES

Well, once again the holidays are upon us. The folks out at East Bay FOG (aka First Osborne Group) will be celebrating the joys of the season at their annual party. Cookies and punch will be served, and Bud Townsend will preside in his traditional Santa role. The festivities will be held on December 12 at FOG's 7:30 pm meeting, located at B&B Electric, 2842 Ford Street, Oakland. Call (415) 834-7897 for information and/or directions.

Meanwhile, in Southern California, the South Bay Color Computer Club, which meets in Torrance, is looking for members. They describe their membership as consisting of "a friendly, mixed group of people all concerned with the prosperity of the Color Computer." Dedicated to the hallowed principle of mutual assistance, this self-described "swell bunch of people" features a broad spectrum of ideas and speakers on subjects ranging from robots to speech synthesizers. Meetings are held on the third Friday of the month at Mercury Savings in Torrance. For more information contact Andrew Corlett at (213) 538-8394.

Also in Southern California, Miles Hillis has acquired an AT&T 6300 computer and is interested in forming an AT&T user group in West Los Angeles. If you have an AT&T 6300 or 8086-compatible deskpro model, or are thinking about getting one, please contact him at (213) 472-3522. Since this is also his business number, please specify that you're calling with regard to the user group when you leave your message.

MicroTimes is always interested in *your* group and its doings, whether speakers, events, or social gatherings. Please let us know what you're up to and we'll pass the word. And don't forget to use our free user group listings. Write or call me, Mary Eisenhart, c/o MicroTimes, 5951 Canning St., Oakland, CA 94609, (415) 652-3810.

Northern California Sanyo computer devotees have told us that they're interested in attracting like-minded souls. Barbara Valley, the secretary of the Sanyo 1100/1200 User Group of the SF Bay Area, wishes to point out that her group meets every second Friday of the month at the Sears Savings Bank, 1820 S. Grant Ave., San Mateo. Write to P.O. Box 297, San Mateo, CA 94401 for further information. Send a large SASE if you'd like a sample copy of the group newsletter. Also, Willy Denninger of Oakland is forming a user group for those interested in the Sanyo MBC-1100/1150, and offers to trade programs with other Sanyo users. If this sounds like your kind of group, call Willy at (415) 534-1981 or write to 5885 Bancroft Ave., Oakland, CA 94605.

Last but not least, all of us at MicroTimes wish you and yours a happy holiday season and all the best in the new year.

USER GROUP LISTINGS

AT&T 6300
West LA: AT&T 6300 or 8086 compatible (desk pro) group forming. Contact Miles Hillis, (213) 472-3522, leave name and interest.

Santa Rosa KUG
Owners of Kaypro computers or CP/M systems are invited to join the SRKUG. We conduct seminars and software instruction/training. Come join the fun. Meetings 3rd Thursday of the month at 7 pm. Call for meeting address: James Daniels, 1029 Damon Court, Santa Rosa, CA 95401, (707) 575-8149.

PC-Hackers (International)
This 300-member, 16-page newsletter-publishing, PC-compatible group began as a Sanyo MSDOS club in March 1984. All PC-compatible owners are welcomed at our monthly First Wednesday meetings at 7 pm in the conference room of San Mateo's Fashion Island (Highway 92, east of 101). Dues: $30. Contact: PC Hackers, 12155 Edgecliff, Los Altos, CA 94022.

20/64 Club
The Cupertino chapter of the 20/64 club for Commodore users meets the second Sunday of each month, Cupertino Public Library, 6 pm. Contact Rex Ackerman, P.O. Box 61063, Sunnyvale, CA 94086. Phone (408) 245-7270.

South Bay Victor*Group
The South Bay Victor*Group meets at 7 pm at Computer Insights, 40957 Grimmer Blvd., Fremont, CA. Public domain software is usually available. Meetings are the first Tuesday of the month. Contact John Kimber, 38635 Drexel Court, Fremont, CA 94536, (415) 797-6423.

San Francisco Victor*Group
The San Francisco Victor*Group meets at 4 pm the third Sunday of each month at LaBettola di Adolph Restaurant, corner of Broadway and Montgomery. Come early for public domain copying. Contact Darrell Bross, 254 Winding Way, San Francisco, CA 94112, (415) 586-5788.

East Bay Victor*Group
The East Bay Victor*Group (for users of Victor 9000's and ACT Apricot machines) meets at 7 pm the second Wednesday of every month at Monarch Computers, at 863C San Pablo Ave., Albany, CA. Public domain software usually available.

East Bay Timex/Sinclair User Group (EBZUG)
Timex/Sinclair user group. S/W library and newsletter. Meets at West Branch of Berkeley Public Library at corner of University and San Pablo. Meets 3rd Tuesday of the month at 7:30 pm. Contact Rick Link, 654 40th St., Richmond, CA 94805, (415) 234-3310.

Peninsula Timex/Sinclair User Group (PUG)
Timex/Sinclair user group. S/W library and newsletter. Meets at Peninsula Hospital, 1783 El Camino, Burlingame. Meets 3rd Sunday of the month at 1 pm. Contact George Mockridge, 263 Gateway #107, Pacifica, CA 94044, (415) 359-3198.

Silicon Valley Timex/Sinclair User Group (SVTSUG)
Timex/Sinclair user group. S/W library and newsletter. Meets at Dysan Corp., 5201 Patrick Henry Drive, Santa Clara. Meets last Tuesday of the month at 7 pm. Contact Rita Carr, P.O. Box 4133, Santa Clara, CA 94044-0133, (408) 738-2888 ext. 45.

North Bay R2E
Forming user group for R2E System Microcomputer users. Please call (415) 235-1598 for information. First meeting will be held in El Cerrito in early November.

LA 99er Computer Group
TI 99/4A support, classes and SIGs, large software library, monthly newsletter. Demonstrations, bulk purchase discounts on hardware, software and books. A good group to join. Meetings at Torrance Public Library, 3031 Torrance Blvd., Torrance, CA. 4th Wednesday of the month, 7 pm. Contact Terrie Masters, 148 S. Maple Drive, Beverly Hills, CA 90212, (213) 271-6930.

San Francisco Commodore Users Group
Public domain library, classes, tech help, in-depth demonstrations, monthly newsletter, Epromer, savings on purchases, all this and more. BBS # (415) 567-5046 300 baud. Meeting address 256 Laguna Honda Blvd., San Francisco, 3rd Tuesday of the month, 7:30 pm. Contact Roger Tierce, 278 27th Ave. #102, SF, CA 94121, (415) 387-0225.

Club of Hewlett-Packard Handheld Users (CHHU)
The true personal computer is small enough to always be conveniently with the user. CHHU, pronounced "chew," is dedicated to the ultimate personal computer. Membership is $30/yr. You will receive 10 issues of the CHHU Chronicle. Meetings are announced in the CHHU Chronicle, or contact Richard J. Nelson, 2545 W. Camden Ave., Santa Ana, CA 92704, (714) 754-7757.

Computer Professionals for Social Responsibility
P.O. Box 717, Palo Alto, CA 94301. (415) 322-3778.

Computer Professionals for Social Responsibility (East Bay)
902 Rose Ave., Piedmont, CA 94611. Contact Bruce Joffe, (415) 768-0288 days, (415) 654-5263 eves.

San Francisco Apple Core

Meets every third Saturday of the month at Fort Mason, Bldg. C, Room 100 at 10 am. New products and innovations are featured for Apple II, Apple III, Macintosh and Lisa. Public domain library, SIGs, tech help, newsletter. $20 per year membership. Info: SF Apple Core, 1515 Sloat Blvd., Suite 2, San Francisco, CA 94132. (415) 566-2342 (voice), (415) 474-8608 (BBS/modem).

South Bay Color Computer Club

TRS-80, TDP-100, Dragon. Meets third Friday of the month at Mercury Savings, 22939 Hawthorne Blvd., Torrance. Info: Andrew Corlett, 1435 W. 172nd St., Gardena, CA 90247. (213) 538-8394.

East Bay FOG (First Osborne Group)

Osborne, Kaypro and Morrow. Meets second Wednesday of the month at B&B Electric, 2832 Ford Street, Oakland. 6 pm workshops, 7:30 pm program. For info contact A Central Place, 477 15th St., Room 200, Oakland, CA 94612. (415) 834-7897.

Byte Bandits of America

TRS-80's workshop computers club — bimonthly meetings — 2nd Saturday and 4th Wednesday of the month. Bring your computers. Free membership. Modem: (408) 374-3974. Meetings at 780 Many Ave., Campbell, CA. For info contact R.W. Brown, (408) 379-2774.

ABACUS (Atari Bay Area Computer Users Society)

All ATARI users or prospective users are welcome. Membership ($15/year) provides public domain software, low cost blank disks, monthly newsletter, group prices on hardware and software, help from experts, low cost classes for beginners. Meetings first Saturday of the month, Fort Mason, SF, Room 300, Bldg. C, 10 am-2pm. Contact Bill Zinn, P.O. Box 1823, Mill Valley, CA 94941. (415) 753-8483.

San Francisco 99ers

One General Meeting per month plus uncountable mini-meetings for training. Over 500 programs available in library. Meetings second Tuesday of the month, 6:30 pm, Texas Instruments Learning Center, SF. Contact Dick Altman, 1053 Shrader St., San Francisco. (415) 661-1994.

Foothill Epson User Group

Meets fourth Tuesday of the month at 3132 Foothill Blvd., La Crescenta. All types of micros are welcome. Demonstrations, discussions, newsletters, BBS, etc. For info contact: Jerry Jamriska, 2960 Hawkridge Dr., La Crescenta, CA 91214. (818) 248-7133.

Club 64

National user group. Monthly newsletter, BBS, group purchasing, public domain software, much more. Contact: Robert Johnson, (213) 925-4049.

South Bay Apple III User Group

The Apple III is alive and well in Southern California. Come join us on the IIIrd Tuesday of each month. Product demos and discussions and more. Meeting address 1000 Victoria Avenue, Room #SC-E157, Carson, 7:30 pm, IIIrd Tuesday. Contact Gary, P.O. Box 432, Redondo Beach, CA 90277, (213) 316-7738.

SANYO MBC 1100-1150

user group now forming in Oakland. Call or write (415) 534-1981, 5885 Bancroft Ave., Oakland 94605 for meeting time and location.

SANYO 1100/1200 USER GROUP

of the San Francisco Bay Area, P.O. Box 297, San Mateo, 8-10 pm, every 2nd Friday of month. Send large self-addressed stamped envelope for copy of newslettter.

COMPUTER COTTAGES *continued from page 20*

talk to the Hewlett-Packard 2000, model 3 mainframe.

For security reasons, General Medical Centers is using an extremely limited number of telecommuting employees. Walker cannot initiate calls himself; the company must seek his help, so there is no chance of randomly accessing secured information. Hackers cannot access any information because they are not physically connected to the system.

For disabled employees or parents who wish to be at home for child care, the advantages are obvious. Others, like 60-year-old Marylou Finney of Santa Ana, California, like it because it keeps them "mentally active and earning some extra spending money in retirement." If one partner of a dual-career couple has to relocate, the other partner could maintain his or her job through telecommuting. Companies faced with space problems could reduce the need for costly additions or relocation by providing for home employment.

Surprisingly enough, not all employees who experimented with the telecommuting program were completely sold on it. Employee complaints ranged from weight gain due to unstructured breaks and lunches to deprivation of social contacts with friends and co-workers. Most people are more comfortable in groups. They need continual social approval and interaction.

So who are today's potential telecommuters and homeworkers? Alvin Toffler, author of *The Third Wave*, and John Naisbitt, author of *Megatrends*, both suggest that office workers performing tasks such as data entry, typing, preparing invoices, etc., are the best suited, as they require little direct face-to-face transaction. But potential candidates appear to be the picture of middle-class life, male or female, either professionals, managers or clerical workers.

Pilot programs are still rare, and not all companies that have experimented with work at home have been completely thrilled. Toffler stated in *The Third Wave*, "To suggest that millions of us may soon spend our time at home, instead of going out to an office or factory, is to unleash an immediate shower of objections." True to his prediction, labor specialists and union leaders fear that computerized workshops will circumvent minimum wage laws and pass over employees due for promotion. There are no mandatory safety and health standards legislated in the homes, and workers' compensation carriers are worried about undocumented claims resulting from accidents in the home which could be construed as "work-related." This "doomsday" prediction pictures Mom, Pop, and the kids clustered around their home computers, working long hours for pennies a day. While the technology of teleworking is relatively easy, the management of it seems to be much more difficult. For example, office managers feel threatened as employees disappear away from the central office.

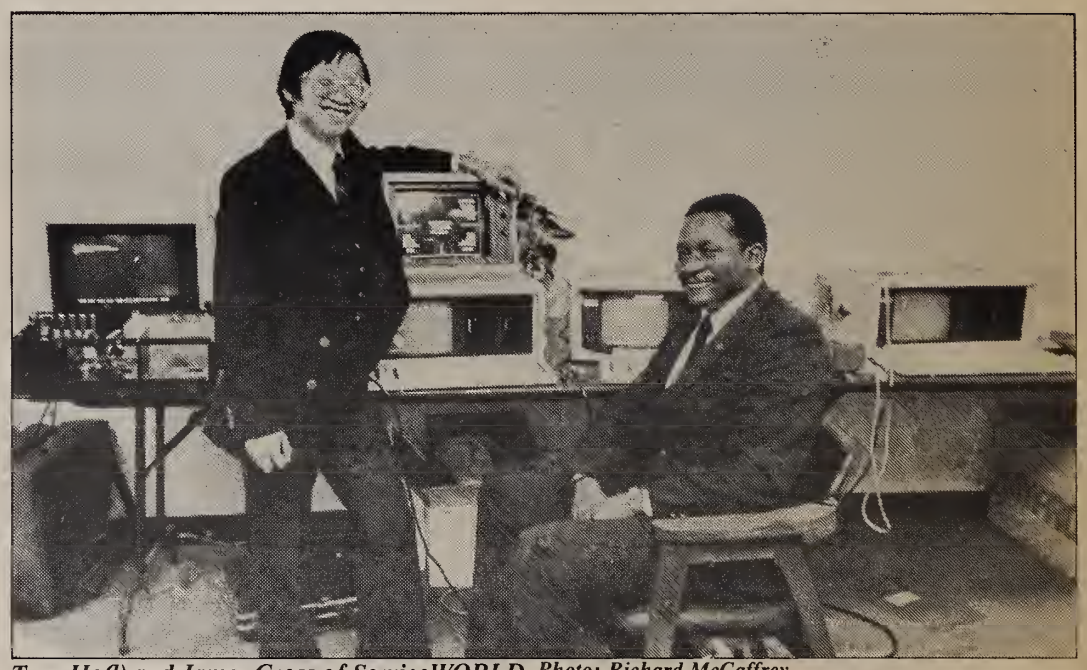
Steph Masica. Photo courtesy of Control Data Corporation.

Alvin Toffler predicted increased community stability and participation as workers telecommute to new jobs and remain in the same house. The work-at-home situation may not be for everyone, but groups such as working mothers and the disabled can definitely benefit from it. Who knows, maybe soon you'll trade in your car keys for a computer terminal and forget about that tiring commute to work. ■

SERVICE WORLD

A User-Friendly Company for Real People

By Richard L. Cohen



Tune Ho(l) and James Cross of ServiceWORLD. Photo: Richard McCaffrey

To the average customer purchasing a new personal computer, everything seems to be coming up roses. He has just seen the salesman demonstrate all these wonderful things that can be done with the computer. The advantages for his business or personal recreational pleasures seem almost limitless.

That optimism often stops the moment the customer gets back to his office or home with the machine. He thought it would be easy to hook the thing up, but he just can't get it figured out. A call to the computer store results in some oral instructions, but nobody will come out for free to show him how to do it.

Then he finally gets the machine working and it breaks down. A quick call to the computer store, and all of a sudden he finds that he's a second class citizen. Service, it seems, is not as great a concern for the store as moving systems out the door. Maintaining a computer system is now just another headache in the life of the customer.

This scenario is not uncommon, says Tune Ho, president of ServiceWORLD, a San Francisco-based outfit that was founded nine months ago to both sell and service personal computers. "Retailers are only interested in retail, retail and retail," Ho says. "Their service departments leave much to be desired. Our goal is to be 50 percent retail and 50 percent service."

The company sells IBM and Compaq personal computers and a full range of compatible peripherals. Once a system is sold, a company representative delivers it right to the customer's site of operation and does all the necessary hookups. The ServiceWORLD rep also spends some time helping the customer get acquainted with the machine.

For a year the company will service the system free of charge. Then a standard service contract is drawn up if the customer so desires. In either case, a company rep comes to the computer rather than the customer having to drag the system into a central location for repair. The company also delivers and installs free all peripherals that a customer may buy, something most retail computers stores do not do.

Before starting ServiceWORLD, Ho was the service manager for Computerland of San Francisco. His partner, W. James Cross, was the store manager. Sensing a market opportunity, the two left Computerland and set up shop in the offices of Phaser Systems Inc., a San Francisco-based firm selling software for personal computers. The two had initially met the Phaser principals when they were employed at Computerland and sold a computer system to the company. Phaser gave the fledgling ServiceWORLD a $40,000 line of credit in exchange for a 25 percent equity interest.

To attract business, the company undertook an extensive advertising campaign that included billboards, radio, television and newspapers. Business was also generated by the word of mouth reputation of the company principals. Ho, for one, was given an award by IBM in 1983 for extraordinary technical support.

The company has no retail store, nor does it have any plans to open one. "A retail store's only source of customers is the front door," Ho says. "Instead, we'd rather go and find our clients." The company has sales reps who seek out potential purchasers of ServiceWORLD's products or service contracts.

This approach seems to be working. ServiceWORLD grossed $275,000 in October and had a $20,000 profit. The company has landed contracts to service 3000 personal computers at UC Berkeley, 100 at Bell Savings and 140 at Consolidated Capital, a real estate investment company in Emeryville.

Cross, ServiceWORLD's chief executive officer, says that the company's average customer purchases 30 personal computers (or the service contracts for that amount). His goal is to increase that average substantially. "We're really aiming at the Fortune 1000 market," he says. "It's more profitable for us to sell a lot of systems to one customer than only a few."

Unlike many small businesses, undercapitalization has not been a problem for ServiceWORLD. Ho and Cross each put in $20,000 of their own money to start the company. Along with the $40,000 line of credit from Phaser, the company was not hurting. Since then, Ho's relatives in Hong Kong have chipped in an additional $150,000.

ServiceWORLD's philosophy of personalized customer help and continuing equipment maintenance seems to be paying off. The company is now located in plush quarters on Francisco Street next to the Embarcadero. They now have a dozen employees and are currently hiring a few more. ■

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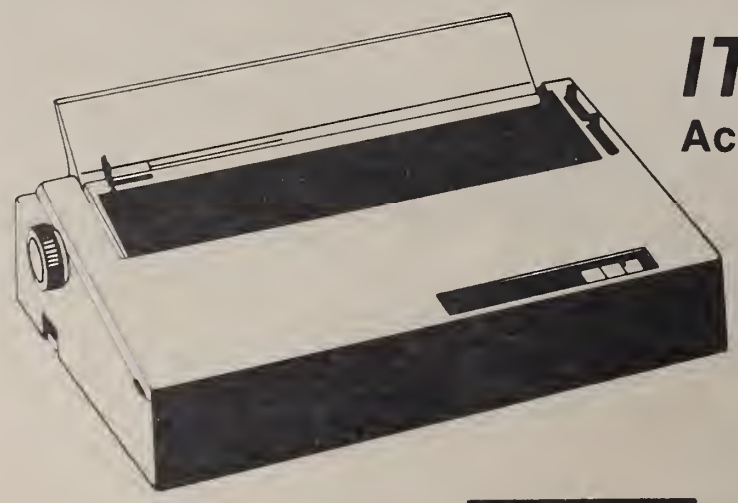

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